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October 30, 2001

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: Third Quarter 2001 Ambient Air Monitoring Report

Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report July - September, 2001 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. This monitor is not included in the official approved ambient air monitoring program and is included as an attachment to this letter at the request of the Illinois EPA.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,

Heather Young, CHMM  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA--Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File

2001 3RD QUARTER AVERAGE CALCULATION

LOCATION Extra

DATE	FILTER NO	FINISH TIME	START TIME	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
7/6/01	G6048716	30409.7	28989.7	1420	46	1960	9714	158100	4.96	80.68
7/12/01	G6048723	31850.8	30410.8	1440	46.6	2013	1106	76300	0.55	37.90
7/18/01	G0031462	33291.9	31851.9	1440	45.4	1961	4105	260200	2.09	132.67
7/25/01	*									Not enough filters
7/30/01	G0031469	34733.2	33293.2	1440	44.2	1909	4344	229800	2.28	120.35
8/05/01	G0031479	36174.3	34734.3	1440	45.4	1961	121	53400	0.06	27.23
8/11/01	*									Not enough time, wrong day
8/17/01	G0031491	38274.2	36834.2	1440	45.4	1961	360	75300	0.18	38.39
8/23/01	*									Not enough filters
8/29/01	G0031493	39715.1	38275.1	1440	45.4	1961	1017	103200	0.52	52.62
9/04/01	G0031503	41156.2	39716.2	1440	45.4	1961	1105	137000	0.56	69.85
9/10/01	G0031515	41157.2	41157.2	0						Power failure
9/16/01	G0031514	42597.1	41157.2	1439.9	45.4	1961	1878	115300	0.96	58.79
9/22/01	*									Not enough filters
9/28/01	G0031592	45477.9	44038	1439.9	45	1944	153	69600	0.08	35.80
=====										
										AVERAGE 1.22
										65.43

\*Not included in average due to reason noted

**AMBIENT AIR MONITORING**  
**QUARTERLY REPORT**  
**JULY - SEPTEMBER 2001**  
**FOR**  
**TOTAL PARTICULATE**  
**AND LEAD**

**CHEMETCO, INC.**  
**October 2001**





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## **1.0 INTRODUCTION**

This document presents the summary of the third calendar quarter year 2001 ambient air monitoring performed at the Chemetco, Inc. facility in Madison County.

### **1.1 Monitoring Description**

The third quarter ambient air monitoring began on July 1, 2001, and sampling for total suspended particulates and lead in the particulate was performed on a once every sixth day basis. The quarterly sampling ended on September 30, 2001. Each day, a weather log was maintained documenting wind speed, wind direction, temperature, relative humidity and precipitation. Site data is utilized unless there is problem with the computer or program. In such a case, the information is obtained from the Nation Weather Service and recorded by the security guard. Chemetco also set up an account with the Midwest Climate Center who records data at two different locations near the facility. Chemetco has purchased a new weather station. The new weather station was set up during last quarter. Currently the rainfall gauge is not functioning and has been sent back to the manufacturer for calibration.

The location of the monitoring sites was based on a modeling report done by Versar, Inc. and approved by IEPA. All locations are shown on a map in Figure 1-1.

Standard operating procedures were followed for the filter conditioning, sampling, sampler operation, analyses, etc, are shown in Table 1.1. Complete copies of the SOP's were provided in the Ambient Air Monitoring Quality Assurance/Quality Control Plan.

### **1.2 Monitoring Report**

The following pages contain the results of the second quarter monitoring. Section 2 contains an accounting of all the test dates and reasons for eliminating data from certain test dates. Section 3 contains the quarterly averages, the quality assurance data and meteorological data. The Appendices include copies of the Filter Conditioning Logsheets with total suspended particulate calculation, the laboratory analysis, and the calculation worksheets.

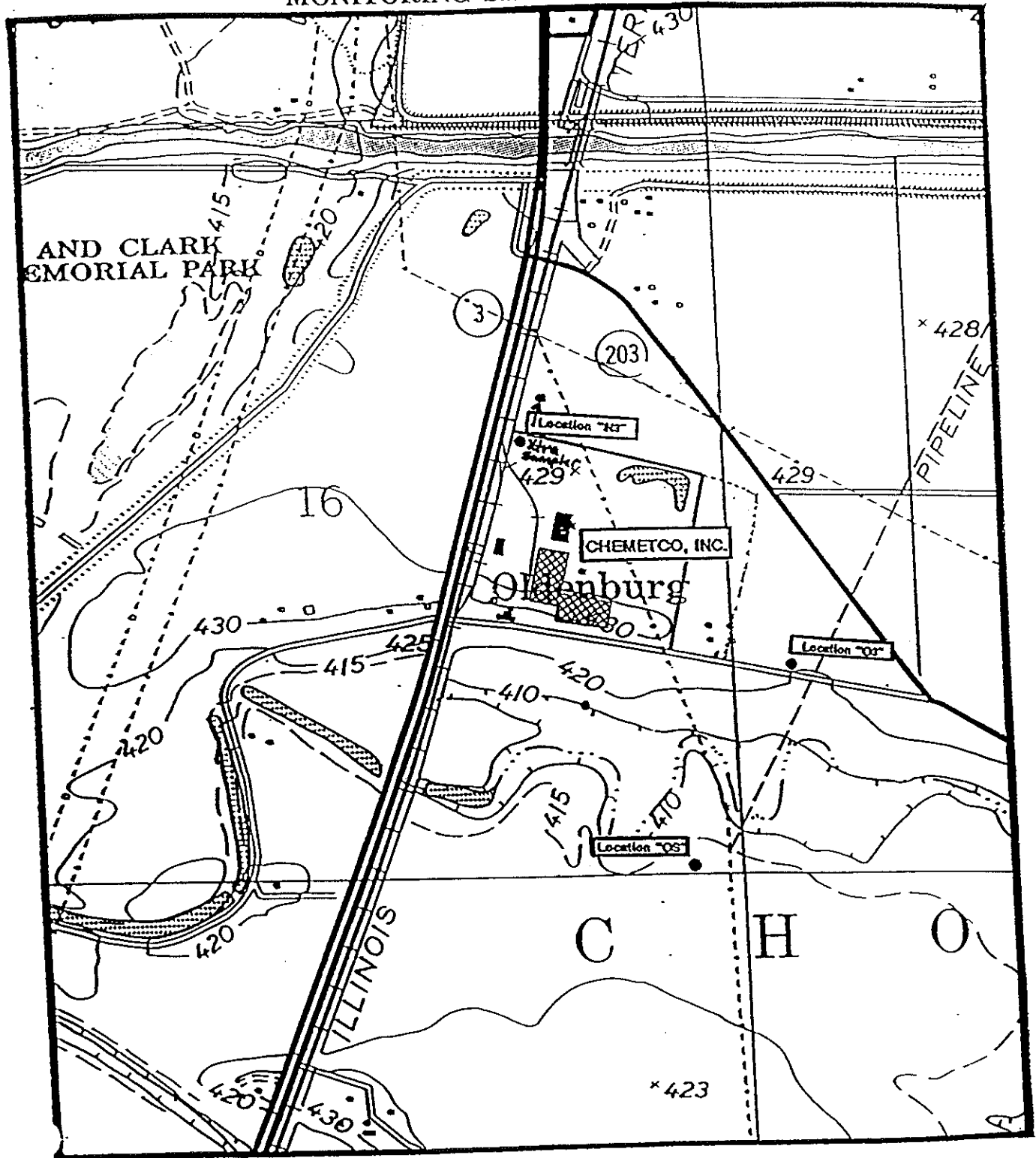
### **Relocation of Colocated Northern Monitors**

Chemetco believed that all data collected from N3 and N3-QC at their former location just south of the facility's northern fence was highly questionable and not valid. As evidenced by an analysis of quarterly ambient air monitoring, the monitors in their former location had been significantly impacted by nearby facility activities, structures, microclimatic influences, and/or surrounding entrained materials. The IEPA agreed with Chemetco regarding the need to relocate the northern monitors as outlined below.

Chemetco requested in a letter dated June 18, 1998, to IEPA to move the colocated ambient air monitors located in the northern portion of the facility in order to obtain samples which truly represent ambient air. The relocation was approved by IEPA in a letter dated June 24, 1998.

Sampling of the ambient air monitors in the new location was initiated July 25, 1998. Additional sampling events were scheduled that same week to allow the collection of the appropriate number of samples for the third quarter 1998. Sampling proceeded as scheduled in the current location until the new monitors were in place. Chemetco is also utilizing dedicated Dickson recorders for all four official air monitors, the new colocated N3 and N3-QC, OS and O3. The aforementioned relocation of the northern ambient air monitors has allowed the collection of a more representative sample of ambient air similar to that collected by the ambient air monitors OS and O3.

FIGURE 1-1  
MONITORING SITE LOCATIONS



**TABLE 1-1**  
**STANDARD OPERATING PROCEDURES**

Determination of Total Suspended Particulates in Ambient Air Filters

Filter Conditioning

Lead Analysis in Ambient Air Filters

Operation of GMW 2310 TSP Samplers

Packaging and Shipment of Samples

## 2.0 SAMPLING DATE ACCOUNTING

Following is a list of the dates the monitors were to have run. Table 2.1 accounts the dates and events.

TABLE 2.1 - Sample Date Accounting

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
7-06-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
7-12-01	N3QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
7-18-01	N3-QC	No	No	Power failure, did not run
	N3	No	No	Ran over, did not analyze
	OS	No	No	Ran over, did not analyze
	O3	OK	Yes	
7-25-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
7-30-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
8-05-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
8-11-01	N3-QC	No	No	Operator error, did not run
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
8-17-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
8-23-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

TABLE 2.1 - Sample Date Accounting (con't)

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
8-29-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
9-04-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
9-10-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
9-16-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
9-22-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
9-28-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	



### 3.0 MONITORING DATA

After the receipt from the laboratory of all data for the quarterly report, averages for each monitoring site were calculated from the pool of data. In addition, at site N3, two samplers were set up for quality assurance purposes. A standard deviation, lower and upper range was determined based on those samples and under normal circumstances can be assumed to represent accuracy for all locations.

Each day, meteorological data was noted. The weather information was obtained from either the National Weather Service, the Midwest Climate Center or the on-site weather station. These logs are shown in Figure 3.1 and quarterly averages are discussed in Section 3.2.

#### 3.1 Quarterly Averages Calculation

From the pool of acceptable data, quarterly averages were calculated by using the simple arithmetic mean determination shown in Equation 1.

$$X = \frac{\sum X_i}{n} \quad \text{Equation 1}$$

where,

$X_i$  = individual sampling data,

$n$  = the number of valid sampling points in the quarter.

**FIGURE 3-1  
METEOROLOGICAL DATA SHEET**

**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
7-01-01	8	180		79	66	0.10
7-02-01	9	135		77	72	0.03
7-03-01	9	112		75	62	0.04
7-04-01	8	112		79	59	0.00
7-05-01	7	180		83	33	0.50
*7-06-01	7	157		79	32	0.10
7-07-01	12	90		79	23	0.00
7-08-01	12	180		86	53	0.00
7-09-01	8	247		90	30	0.00
7-10-01	7	135		89	31	0.00
7-11-01	7	0		87	65	0.00
*7-12-01	—	—		82	57	0.00
7-13-01	8	90		74	57	0.50
7-14-01	3	202		73	61	0.00
7-15-01	3	315		75	55	0.00
7-16-01	11	135		79	41	0.00
7-17-01	10	157		82	46	0.00
*7-18-01	9	180		78	63	1.20
7-19-01	8	157		73	83	0.51
7-20-01	8	135		76	83	3.20
7-21-01	7	203		79	82	0.15
7-22-01	5	225		84	55	0.00
7-23-01	7	180		85	68	0.00
7-24-01	6	202		85	75	0.50
*7-25-01	7	202		83	70	0.51

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind		Temperature (F)	Relative Humidity %	Precipitation
		Direction	Sigma			
7-26-01	7	90		83	73	0.10
7-27-01	7	157		79	78	0.00
7-28-01	9	202		77	84	0.00
7-29-01	5	45		80	83	0.00
*7-30-01	5	45		84	68	0.00
7-31-01	12	112		87	62	0.00
8-01-01	12	135		88	61	0.00
8-02-01	9	180		89	63	0.00
8-03-01	15	45		74	87	0.10
8-04-01	5	0		78	76	0.00
*8-05-01	8	90		84	65	0.00
8-06-01	8	90		84	54	0.00
8-07-01	6	45		85	56	0.00
8-08-01	5	90		88	58	0.00
8-09-01	5	225		81	82	0.00
8-10-01	10	180		81	71	0.58
*8-11-01	6	315		78	76	0.00
8-12-01	6	45		79	71	0.00
8-13-01	0	0		79	66	0.00
8-14-01	6	0		75	61	0.00
8-15-01	5	0		73	54	0.00
8-16-01	14	225		80	55	0.00
*8-17-01	7	315		76	57	0.20
8-18-01	5	90		78	59	0.50
8-19-01	9	315		73	57	0.30

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
8-20-01	7	315		74	62	0.00
8-21-01	12	90		79	61	0.00
8-22-01	13	180		87	69	0.00
*8-23-01	12	180		89	59	0.00
8-24-01	10	90		77	84	0.00
8-25-01	8	90		76	93	0.58
8-26-01	8	180		75	90	0.10
8-27-01	0	90		78	66	0.20
8-28-01	6	315		85	47	0.00
*8-29-01	6	0		82	60	0.00
8-30-01	6	135		81	67	0.00
8-31-01	9	0		72	97	0.30
9-01-01	5	0		73	61	0.10
9-02-01	7	90		75	61	0.00
9-03-01	9	90		78	61	0.00
*9-04-01	0	0		81	67	0.00
9-05-01	8	45		83	74	0.00
9-06-01	10	135		81	76	0.00
9-07-01	15	135		83	65	0.20
9-08-01	20	180		81	71	0.00
9-09-01	7	0		80	62	0.58
*9-10-01	3	270		65	78	0.30
9-11-01	0	0		69	60	0.00
9-12-01	0	0		73	59	0.00
9-13-01	0	0		74	53	0.00

\* Denotes Air Sampling Date

**FIGURE 3-1 (cont.)**  
**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
9-14-01	14	45		70	56	0.00
9-15-01	3	90		64	49	0.00
*9-16-01	7	90		67	47	0.00
9-17-01	6	180		71	49	0.00
9-18-01	6	225		70	84	0.00
9-19-01	12	180		73	93	1.30
9-20-01	0	0		60	89	0.00
9-21-01	18	180		71	75	0.30
*9-22-01	6	315		68	65	0.20
9-23-01	6	90		70	63	0.00
9-24-01	6	315		62	72	0.00
9-25-01	6	0		53	59	0.00
9-26-01	6	315		53	54	0.00
9-27-01	6	270		59	53	0.00
*9-28-01	0	0		62	62	0.00
9-29-01	9	45		59	69	0.00
9-30-01	5	0		63	60	0.00

\* Denotes Air Sampling Date

### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

TABLE 3.1 - Sampler Location N3

DATE	FILTER NO	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
7-06-01	G6048721	1.79	65.89
7-12-01	G6048726	0.46	45.91
7-18-01	G6048731	Ran over, did not analyze	-----
7-25-01	G0031466	1.14	83.79
7-30-01	G0031468	0.76	64.52
8-05-01	G0031476	0.06	34.82
8-11-01	G0031481	0.22	32.78
8-17-01	G0031490	0.10	55.55
8-23-01	G0031494	0.09	35.76
8-29-01	G0031498	0.71	63.75
9-04-01	G0031508	0.41	84.19
9-10-01	G0031512	0.47	44.28
9-16-01	G0031517	0.36	53.59
9-22-01	G0031524	0.64	61.20
9-28-01	G0031593	0.00	34.73
		=====	=====
	AVERAGE	0.48	54.32

TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
7-06-01	G6048718	0.00	34.46
7-12-01	G6048724	0.00	26.81
7-18-01	G6048729	Ran over, did nt analyze	-----
7-25-01	G0031464	0.42	30.05
7-30-01	G00.1472	0.21	29.63
8-05-01	G0031475	0.00	25.80
8-11-01	G0031484	0.05	27.87
8-17-01	G0031487	0.37	29.04
8-23-01	G0031495	0.09	26.39
8-29-01	G0031500	0.03	45.29
9-04-01	G0031506	0.16	52.77
9-10-01	G0031511	0.40	19.38
9-16-01	G0031519	0.01	33.08
9-22-01	G0031522	0.25	31.75
9-28-01	G0031595	0.08	38.33
		=====	=====
	AVERAGE	0.33	32.19

TABLE 3.3 - Sampler Location O3

DATE	FILTER NO.	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
7-06-01	G6048717	0.00	31.90
7-12-01	G6048725	0.00	21.62
7-18-01	G6048730	0.11	37.63
7-25-01	G0031465	1.37	38.86
7-30-01	G0031471	0.20	31.36
8-05-01	G0031474	0.00	27.38
8-11-01	G0031483	0.05	29.01
8-17-01	G0031488	0.45	37.02
8-23-01	G0031496	0.00	26.86
8-29-01	G0031501	0.03	51.19
9-04-01	G0031505	0.33	64.07
9-10-01	G0031510	0.40	24.56
9-16-01	G0031518	0.01	39.39
9-22-01	G0031523	0.23	34.26
9-28-01	G0031594	0.08	33.83
		=====	=====
	AVERAGE	0.22	33.06



TABLE 3.4 - Filter Blank

DATE	FILTER NO.	LEAD (ug/filter)	TSP* (ug/filter)
7-06-01	G6048722	6	7500
7-12-01	G6048728	6	4600
7-18-01	G0031463	89	900
7-25-01	G0031467	6	-2700
7-30-01	G0031473	84	-4700
8-05-01	G0031480	6	-7100
8-11-01	G0031486	6	-600
8-17-01	G0031492	6	-400
8-23-01	G0031497	6	-3500
8-29-01	G0031502	212	100
9-04-01	G0031509	6	-200
9-10-01	Not enough filters	-----	-----
9-16-01	G0031521	192	-500
9-22-01	G0031591	18	1100
9-28-01	G0031597	6	2600

\*TSP - Total Suspended Particulate

### 3.3 Instrument Precision Calculation

The estimates of precision for ambient air quality measurements from the TSP method are calculated from results obtained from the collection of two samplers at one sampling site, N3. The calculated precision from this one sampling site is considered indicative of the precision at all sampling sites for the TSP method.

Using the paired measurements for the official sampler, labeled "N3" and the secondary sampler, labeled "N3-QC," the precision was calculated from the following equations. These numbers are reported on the Data Assessment Report shown in Figure 3-2.

#### Percentage Difference, $d_i$

$$d_i = \frac{Y_i - X_i}{X_i} \times 100\%$$

where:  $Y_i$  = the concentration TSP measured by the secondary sampler; and  
 $X_i$  = the concentration TSP measured by the official sampler.

#### Average Percentage Difference, $d_j$

$$d_j = \frac{\sum d_i}{n}$$

where:  $n$  = the number of comparisons.

#### Standard Deviation, $S_j$

$$S_j = \sqrt{\frac{\sum (d_i)^2 - n(d_j)^2}{n - 1}}$$

#### 96% Probability Limits

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2}$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2}$$

**FIGURE 3-2**  
**DATA ASSESSMENT REPORT**

**Date:** October 30, 2001  
**Auditor:** Heather Young

---

**Allocated Samplers**

$d_i = 12.62\%$   
 $d_j = -7.10\%$   
 $S_j = 19.89\%$

**Upper Limit = 12.39 %**

**Lower Limit = -26.59%**

**Range = 27.73 to 63.71**

---

**Flow Rate Percentage Differences:**

**Sampler #1:**(See Sect. 3-4)

**Sampler #2:**(See Sect. 3-4)

**Sampler #3:**(See Sect. 3-4)

**Sampler #4:**(See Sect. 3-4)

### **3.4 Single Instrument Accuracy**

Estimates of accuracy for ambient air quality measurements from the TSP method are calculated from the results of independent audits. Once each sampling quarter, the flow rate of each high-volume sampler is audited.

Jim Henry with the IEPA Collinsville Field Office audits the sampler motors.

### **3.5 Documentation**

For each of the sampling episodes, data packages have been assembled to facilitate the retrieval of necessary data to perform and check calculations, assumptions and determinations and to generate accurate reports. These packages are maintained in a central project file at Chemetco.

Data forms are attached with backup and confirmatory information in Appendices A through C. They include:

- Filter Conditioning and TSP Calculation Logsheets;
- Calculation pages; and,
- Laboratory Analyses Report Sheet.

## **APPENDIX A**

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

**Project Number:** 03QTR1

**Purpose:** Sampler Averages

**Total Number of Pages:** 6 (including this one)

**Date:** October 30, 2001

**Originator's Signature:** 

2001 3RD QUARTER AVERAGE CALCULATION

LOCATION N3-QC

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
7/6/01	G6048720	63178	61738	1440	44.4	1893	4385	432400	2.32	228.42	
7/12/01	G6048727	64619.1	63179.1	1440	43.8	1892	446	44600	0.24	23.57	
7/18/01	*										
7/25/01	G0031461	66060.3	64620.2	1440.1	45.7	1974	642	84100	0.33	42.60	
7/30/01	G0031469	67501.6	66061.6	1440	46.4	2004	2823	175500	1.41	87.55	
8/05/01	G0031478	68942.9	67503	1439.9	46.4	2004	121	70700	0.06	35.27	
8/11/01	*	68944.8	68944.8	0							
8/17/01	G0031482	70385.4	68945.4	1440	46.4	2004	360	95400	0.18	47.59	
8/23/01	G0031489	71827	70387.1	1439.9	45.7	1974	371	66200	0.19	33.53	
8/29/01	G0031499	73283.5	71843.4	1440.1	47	1918	1500	147800	0.78	77.06	
9/04/01	G0031507	74725.2	73285.2	1440	46.4	2004	143	72400	0.07	36.12	
9/10/01	G0031513	76167.5	74727.5	1440	45	1944	1070	91600	0.55	47.12	
9/16/01	G0031516	77608.8	76168.9	1439.9	44.3	1914	866	92700	0.45	48.44	
9/22/01	G0031525	79050.1	77610.1	1440	45.7	1974	1080	102800	0.55	52.07	
9/28/01	G0031592	80491	79051	1440	45	1944	153	69800	0.08	35.91	
=====										AVERAGE 0.55	61.17

Power Failure,did not run

Operator error,did not run

Power Failure, did not run

Operator error, did not run

\*Not included in average due to reason noted

2001 3RD QUARTER AVERAGE CALCULATION

LOCATION N3

DATE	FILTER NO	FINISH	TIME	START	ELAPSED	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
7/6/01	G6048721	1413	0	1413	45.4	1925	3445	126800	1.79	65.89		
7/12/01	G6048726	1412	0	1412	45.4	1923	886	88300	0.46	45.91		
7/18/01	G6048731*	2048	0	2048								
7/25/01	G0031466	1411	0	1411	44.8	1896	2163	158900	1.14	83.79		
7/30/01	G0031468	1415	0	1415	44.8	1902	1453	122700	0.76	64.52		
8/05/01	G0031476	1416	0	1416	44.8	1903	121	65700	0.06	34.52		
8/11/01	G0031481	1412	0	1412	44.8	1898	415	62200	0.22	32.78		
8/17/01	G0031490	1417	0	1417	44.8	1904	192	105800	0.10	55.55		
8/23/01	G0031494	1413	0	1413	44.2	1874	168	67000	0.09	35.76		
8/29/01	G0031498	1416	0	1416	44.2	1878	1339	119700	0.71	63.75		
9/04/01	G0031508	1412	0	1412	45.4	1923	784	161900	0.41	84.19		
9/10/01	G0031512	1416	0	1416	45.4	1929	916	85400	0.47	44.28		
9/16/01	G0031517	1417	0	1417	46	1955	698	104800	0.36	53.59		
9/22/01	G0031524	1412	0	1412	45.4	1923	1231	117700	0.64	61.20		
9/28/01	G0031593	1412	0	1412	45.4	1923	6	66800	0.00	34.73		
=====											AVERAGE	0.48
												54.32

Ran over, did not analyze

Ran over, did not analyze

\*Not included in average due to reason noted



2001 3RD QUARTER AVERAGE CALCULATION

LOCATION OS

DATE	FILTER NO	FINISH TIME	START TIME	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ftr	TSP ug/ftr	LEAD ug/m3	TSP ug/m3
7/6/01	G6048718	1440	0	1440	44.2	1909	6	65800	0.00	34.46
7/12/01	G6048724	1440	0	1440	43.6	1884	6	50500	0.00	26.81
7/18/01	G6048729*	1980	0	1980						
7/25/01	G0031464	1440	0	1440	43.6	1884	794	56600	0.42	30.05
7/30/01	G0031472	1440	0	1440	43.6	1884	388	55800	0.21	29.63
8/05/01	G0031475	1440	0	1440	43.6	1884	6	48600	0.00	25.80
8/11/01	G0031484	1440	0	1440	43.6	1884	102	52500	0.05	27.87
8/17/01	G0031487	1440	0	1440	43.6	1884	698	54700	0.37	29.04
8/23/01	G0031495	1440	0	1440	43.6	1884	168	49700	0.09	26.39
8/29/01	G0031500	1440	0	1440	43.6	1884	51	85300	0.03	45.29
9/04/01	G0031506	1440	0	1440	43.6	1884	303	99400	0.16	52.77
9/10/01	G0031511	1440	0	1440	43.6	1884	762	36500	0.40	19.38
9/16/01	G0031519	1440	0	1440	43.6	1884	23	62300	0.01	33.08
9/22/01	G0031522	1440	0	1440	43.6	1884	473	59800	0.25	31.75
9/28/01	G0031595	1440	0	1440	43.6	1884	153	72200	0.08	38.33
=====										AVERAGE 0.33
										32.19

Ran over, did not analyze

Ran over, did not analyze

\*Not included in average due to reason noted

2001 3RD QUARTER AVERAGE CALCULATION

LOCATION O3

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
7/6/01	G6048717	34717.4	33277.4	1440	45.5	1966	6	62700	0.00	31.90
7/12/01	G6048725	36158.7	34718.7	1440	45.5	1966	6	42500	0.00	21.62
7/18/01	G6048730	37599.9	36159.8	1440.1	44.9	1940	209	73000	0.11	37.63
7/25/01	G0031465	39041.1	37601	1440.1	44.2	1910	2620	74200	1.37	38.86
7/30/01	G0031471	40482.3	39043	1439.3	44.9	1939	388	60800	0.20	31.36
8/05/01	G0031474	41923.8	40483.9	1439.9	44.9	1940	6	53100	0.00	27.38
8/11/01	G0031483	43365.1	41925	1440.1	44.2	1910	102	55400	0.05	29.01
8/17/01	G0031488	44806.5	43366.5	1440	44.9	1940	866	71800	0.45	37.02
8/23/01	G0031496	46247.4	44807.5	1439.9	44.9	1940	6	52100	0.00	26.86
8/29/01	G0031501	47688.7	46248.6	1440.1	43.5	1879	51	96200	0.03	51.19
9/04/01	G0031505	49130	47690	1440	43.5	1879	624	120400	0.33	64.07
9/10/01	G0031510	50571.3	49131.2	1440.1	44.2	1910	762	46900	0.40	24.56
9/16/01	G0031518	52012.4	50572.5	1439.9	44.2	1909	23	75200	0.01	39.39
9/22/01	G0031523	53453.7	52013.7	1440	44.9	2017	473	69100	0.23	34.26
9/28/01	G0031594	54896.4	53456.5	1439.9	45.5	1965	153	66500	0.08	33.83
=====										
AVERAGE									0.22	33.06

\*Not included in average due to reason noted

2001 3RD QUARTER AVERAGE CALCULATION

LOCATION FB

DATE	LEAD FILTER NO	LEAD ug/filter	TSP ug/filter
7/6/01	G6048722 6		7500
7/12/01	G6048728 6		4600
7/18/01	G0031463 89		900
7/25/01	G0031467 6		-2700
7/30/01	G0031473 84		-4700
8/05/01	G0031480 6		-7100
8/11/01	G0031486 6		-600
8/17/01	G0031492 6		-400
8/23/01	G0031497 6		-3500
8/29/01	G0031502 212		100
9/04/01	G0031509 6		-200
9/10/01	*		Not enough filters
9/16/01	G0031521 192		-500
9/22/01	G0031591 18		1100
9/28/01	G0031597 6		2600

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

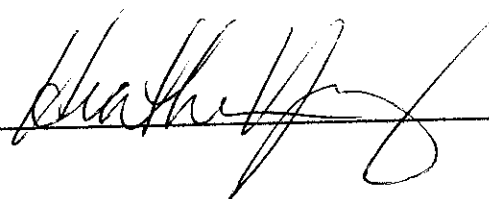
**Project Name:** Ambient Air Monitoring

**Project Number:** 03QTR1

**Purpose:** Sampler Precision Calculation

**Total Number of Pages:** 2 (including this one)

**Date:** October 30, 2001

**Originator's Signature:** A handwritten signature in black ink, appearing to be "D. H. H. H.", written over a horizontal line.

### SAMPLER PRECISION CALCULATION (PARTICULATE)

<u>Sampling Date</u>	<u>Duplicate Sampler</u>	<u>Official Sampler</u>	<u>Difference</u>	<u>Difference (Square)</u>
7-06-01	69.03	65.89	3.23	10.43
7-12-01	23.57	45.91	-22.34	499.08
7-18-01	Power failure	Ran over		
7-25-01	42.60	83.79	-41.10	1689.21
7-30-01	87.55	64.52	23.03	530.38
8-05-01	35.27	34.52	0.75	0.56
8-11-01	Operator error	32.78		
8-17-01	47.59	55.55	-8.05	64.80
8-23-01	33.53	35.76	-2.23	4.97
8-29-01	77.06	63.75	13.31	177.16
9-04-01	36.12	84.19	-48.07	2310.72
9-10-01	47.12	44.28	2.32	5.38
9-16-01	48.44	53.59	-5.15	26.52
9-22-01	52.07	61.20	-9.13	83.36
9-28-01	35.91	34.73	1.18	1.39
		$\Sigma d_i =$	-92.25	$\Sigma d_i^2 =$ 5403.96

$n=13$

$$d_j = \frac{\Sigma d_i}{n} = \frac{-92.25}{13} = -7.10\%$$

$$S_j = \sqrt{\frac{\Sigma(d_i)^2 - n(d_j)^2}{n-1}} = \sqrt{\frac{5403.96 - 13(-7.10)^2}{13-1}} = \sqrt{\frac{5403.96 - 655}{12}} = 19.89\%$$

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2} = -7.10\% + \frac{1.96(19.89)}{2} = -7.10 + 19.49 = 12.39\%$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2} = -7.10\% - \frac{1.96(19.89)}{2} = -7.10 - 19.49 = -26.59\%$$

Official Average Particulate: 54.32 mg/m<sup>3</sup>

Range: 27.73 to 66.71

## APPENDIX B

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 2-Aug-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048718	OS	<6	65.8
G6048717	O3	<6	62.7
G6048721	N3	3,445	126.8
G6048720	N3QC	4,385	132.4
G6048716	Extra	9,714	158.1
G6048722	FB	<6	7.5

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 2-Aug-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048724	OS	<6	50.5
G6048725	O3	<6	42.5
G6048726	N3	886	88.3
G6048727	N3QC	446	44.6
G6048723	Extra	1,106	76.3
G6048728	FB	<6	4.6

Analyst: Matt Shoemaker

Title: Laboratory Technician



**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 9-Aug-01**

**Sample type: Hi-Vol Air Monitoring Program**

**Sample Identification: Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048730	O3	209	73
G0031462	Extra	4,105	260.2
G0031463	FB	89	0.9

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**Analyst: Matt Shoemaker**

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**Title: Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 9-Aug-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031464	OS	794	56.6
G0031465	O3	2,620	74.2
G0031466	N3	2,163	158.9
G0031461	N3QC	642	84.1
G0031467	FB	<6	-2.7

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 16-Aug-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031472	OS	388	55.8
G0031471	O3	388	60.8
G0031468	N3	1,453	122.7
G0031470	N3QC	2,823	175.5
G0031469	Extra	4,344	229.8
G0031473	FB	84	-4.7

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 16-Aug-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031475	OS	<6	48.6
G0031474	O3	<6	53.1
G0031476	N3	121	65.7
G0031478	N3QC	121	70.7
G0031479	Extra	121	53.4
G0031480	FB	<6	-7.1

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 30-Aug-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031484	OS	102	52.5
G0031483	O3	102	55.4
G0031481	N3	415	62.2
G0031486	FB	<6	-6

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Analyst:

Matt Shoemaker

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Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 30-Aug-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031487	OS	698	54.7
G0031488	O3	866	71.8
G0031490	N3	192	105.8
G0031482	N3QC	360	95.4
G0031491	Extra	360	75.3
G0031492	FB	<6	-4

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 13-Sep-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031495	OS	168	49.7
G0031496	O3	<6	52.1
G0031494	N3	168	67
G0031489	N3QC	371	66.2
G0031497	FB	<6	-3.5

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 24-Sep-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031500	OS	51	85.3
G0031501	O3	51	96.2
G0031498	N3	1,339	119.7
G0031499	N3QC	1,500	147.8
G0031493	Extra	1,017	103.2
G0031502	FB	212	0.1

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Analyst: Matt Shoemaker

---

Title: Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 24-Sep-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031506	OS	303	99.4
G0031505	O3	624	120.4
G0031508	N3	784	161.9
G0031507	N3QC	143	72.4
G0031503	Extra	1,105	137
G0031509	FB	<6	-0.2

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 2-Oct-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031511	OS	762	36.5
G0031510	O3	762	46.9
G0031512	N3	916	85.4
G0031513	N3QC	1,070	91.6
G0031515	Extra	298	-3.4

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 2-Oct-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031519	OS	23	62.3
G0031518	O3	23	75.2
G0031517	N3	698	104.8
G0031516	N3QC	866	92.7
G0031514	Extra	1,878	115.3
G0031521	FB	192	-0.5

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 8-Oct-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031522	OS	473	59.8
G0031523	O3	473	69.1
G0031524	N3	1,231	117.7
G0031525	N3QC	1,080	102.8
G0031591	FB	18	1.1

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 11-Oct-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G0031595	OS	153	72.2
G0031594	O3	153	66.5
G0031593	N3	<6	66.8
G0031592	N3QC	153	69.8
G0031596	Extra	153	69.6
G0031597	FB	<6	2.6

Analyst: Matt Shoemaker

Title: Laboratory Technician

## APPENDIX C

Chemetco Environmental Management  
Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G0031591	7/18/01	7/21/01	4383.1	<del>10/26/01</del>	10/5/01	4384.2	1.1
G0031592	7/18/01	7/21/01	4422.1	10/8/01	10/10/01	4491.9	69.8
G0031593	7/18/01	7/21/01	4400.6	10/8/01	10/10/01	4467.4	66.8
G0031594	7/18/01	7/21/01	4371.6	10/8/01	10/10/01	4438.1	66.5
G0031595	<del>7/18/01</del>	<del>7/21/01</del>	4368.5	10/8/01	10/10/01	4440.7	72.2
G0031596	7/18/01	7/21/01	4378.0	10/8/01	10/10/01	4447.6	69.6
G0031597	7/18/01	7/21/01	4364.3	10/8/01	10/10/01	4366.9	2.6
G0031598	7/18/01	7/21/01	4355.9				
G0031599	7/18/01	7/21/01	4364.0				
G0031600	7/18/01	7/21/01	4387.2				
G0031601	<del>7/18/01</del>	<del>7/21/01</del>					
G0031602	7/18/01	7/21/01	4365.8				
G0031603	7/18/01	7/21/01	4352.7				
G0031604	7/18/01	7/21/01	4343.3				
G0031605	7/18/01	7/21/01	4356.3				
G0031606	7/18/01	7/21/01	4345.8				

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G0031525	8/27/01	8/29/01	4364.6	9/26/01	10/5/01	4487.4	102.8
G0031526							
G0031527							
G0031528							
G0031529							
G0031530							
G0031531							
G0031532							
G0031533							
G0031534							
G0031535							
G0031536							
G0031537							
G0031538							
G0031539							
G0031540							



Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G0031509	8/27/01	8/29/01	4439.6	9/12/01	9/20/01	4439.4	-0.2
G0031510	8/27/01	8/29/01	4454.3	9/18/01	9/26/01	4501.2	46.9
G0031511	8/27/01	8/29/01	4443.8	9/19/01	9/26/01	4480.3	36.5
G0031512	8/27/01	8/29/01	4542.0	9/19/01	9/26/01	4627.4	85.4
G0031513	8/27/01	8/29/01	4521.8	9/19/01	9/26/01	4613.4	91.6
G0031514	8/27/01	8/29/01	4530.4	9/20/01	10/01/01	4645.7	115.3
G0031515	8/27/01	8/29/01	4537.1	9/19/01	9/26/01	4533.7	-3.4
G0031516	8/27/01	8/29/01	4527.2	9/20/01	10/01/01	4619.9	92.7
G0031517	8/27/01	8/29/01	4401.1	9/20/01	10/01/01	4505.9	104.8
G0031518	8/27/01	8/29/01	4402.2	9/20/01	10/01/01	4477.4	75.2
G0031519	8/27/01	8/29/01	4369.3	9/20/01	10/01/01	4431.6	62.3
G0031520							
G0031521	8/27/01	8/29/01	4379.2	9/20/01	10/01/01	4377.7	-0.5
G0031522	8/27/01	8/29/01	4353.3	9/26/01	10/5/01	4413.1	59.8
G0031523	8/27/01	8/29/01	4350.6	9/26/01	10/5/01	4419.7	69.1
G0031524	8/27/01	8/29/01	4376.5	9/26/01	10/5/01	4494.2	117.7

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G0031493	8/6/01	8/8/01	4474.8	9/11/01	9/18/01	4578.0	103.2
G0031494	8/6/01	8/8/01	4479.0	9/14/01	9/11/01	4546.0	67.0
G0031495	8/6/01	8/8/01	4448.8	9/14/01	9/11/01	4498.5	49.7
G0031496	8/6/01	8/8/01	4449.6	9/14/01	9/11/01	4501.7	52.1
G0031497	8/6/01	8/8/01	4450.4	9/14/01	9/11/01	4446.9	3.5
G0031498	8/6/01	8/8/01	4424.9	9/14/01	9/18/01	4544.6	119.7
G0031499	8/6/01	8/8/01	4450.6	9/14/01	9/18/01	4598.4	147.8
G0031500	8/6/01	8/8/01	4433.2	9/11/01	9/18/01	4518.5	85.3
G0031501	8/6/01	8/8/01	4435.0	9/11/01	9/18/01	4531.2	96.2
G0031502	8/6/01	8/8/01	4430.1	9/11/01	9/18/01	4430.2	0.1
G0031503	8/6/01	8/8/01	4423.6	9/12/01	9/20/01	4560.6	137.0
G0031504							
G0031505	8/6/01	8/8/01	4441.0	9/12/01	9/20/01	4521.4	120.4
G0031506	8/27/01	8/29/01	4404.2	9/12/01	9/20/01	4503.6	99.4
G0031507	8/27/01	8/29/01	4393.2	9/12/01	9/20/01	4465.6	72.4
G0031508	8/27/01	9/29/01	4420.9	9/12/01	9/20/01	4582.8	161.9

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning				W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	
G0031477								
G0031478	7/24/01	7/26/01	4372.6	8/9/01	8/15/01	4443.3	70.7	
G0031479	7/24/01	7/26/01	4374.2	8/9/01	8/15/01	4427.6	53.4	
G0031480	7/24/01	7/26/01	4377.3	8/9/01	8/15/01	4370.2	-7.1	
G0031481	7/24/01	7/26/01	4333.3	8/17/01	8/23/01	4395.2	62.2	
G0031482	7/24/01	7/26/01	4340.3	8/23/01	8/28/01	4435.7	95.4	
G0031483	7/24/01	7/26/01	4329.7	8/17/01	8/23/01	4385.1	55.4	
G0031484	7/24/01	7/26/01	4339.4	8/17/01	8/23/01	4391.9	52.5	
G0031485	7/24/01	7/26/01	4360.7					
G0031486	7/24/01	7/26/01	4390.8	8/17/01	8/23/01	4384.8	-6.0	
G0031487	8/6/01	8/8/01	4379.8	8/23/01	8/28/01	4434.5	54.7	
G0031488	8/6/01	8/8/01	4460.9	8/23/01	8/28/01	4532.7	71.8	
G0031489	8/6/01	8/8/01	4454.4	9/4/01	9/11/01	4520.6	66.2	
G0031490	8/6/01	8/8/01	4459.8	8/23/01	8/28/01	4565.6	105.8	
G0031491	8/6/01	8/8/01	4492.2	8/23/01	8/28/01	4567.5	75.3	
G0031492	8/6/01	8/8/01	4466.3	8/23/01	8/28/01	4462.3	-4.0	

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G0031461	6/22/01	6/25/01	4590.7	8/12/01	8/16/01	4674.8	84.1	
G0031462	6/22/01	6/25/01	4591.2	7/29/01	8/16/01	4851.8	260.6	
G0031463	6/22/01	6/25/01	4601.8	7/29/01	8/16/01	4602.7	0.9	
G0031464	6/22/01	6/25/01	4613.6	8/12/01	8/16/01	4670.2	56.6	
G0031465	6/22/01	6/25/01	4617.8	8/12/01	8/16/01	4692.0	74.2	
G0031466	6/22/01	6/25/01	4621.2	8/12/01	8/16/01	4790.1	158.9	
G0031467	7/24/01	7/26/01	4626.9	8/12/01	8/16/01	4624.2	-2.7	
G0031468	7/24/01	7/26/01	4616.9	8/16/01	8/14/01	4739.6	122.7	
G0031469	7/24/01	7/26/01	4396.2	8/16/01	8/14/01	4626.0	229.8	
G0031470	7/24/01	7/26/01	4426.7	8/16/01	8/14/01	4602.2	175.5	
G0031471	7/24/01	7/26/01	4375.2	8/16/01	8/14/01	4436.0	60.8	
G0031472	7/24/01	7/26/01	4380.3	8/16/01	8/14/01	4436.1	55.8	
G0031473	7/24/01	7/26/01	4397.3	8/16/01	8/14/01	4392.6	-4.7	
G0031474	7/24/01	7/26/01	4367.0	8/16/01	8/15/01	4420.1	53.1	
G0031475	7/24/01	7/26/01	4361.9	8/16/01	8/15/01	4410.5	48.6	
G0031476	7/24/01	7/26/01	4375.4	8/16/01	8/15/01	4441.1	65.7	

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6048718			4283.2	7/18/01	7/25/01	4349.0	65.8
G6048719	6/18/01	6/22/01	4259.4	7/3/01	7/10/01	4316.1	56.7
G6048720	6/22/01	6/25/01	4262.7	7/18/01	7/25/01	4395.1	132.4
G6048721	6/22/01	6/25/01	4287.9	7/18/01	7/25/01	4414.7	126.8
G6048722	6/22/01	6/25/01	4259.2	7/18/01	7/25/01	4266.7	7.5
G6048723	6/22/01	6/25/01	4231.3	7/20/01	7/26/01	4307.6	76.3
G6048724	6/22/01	6/25/01	4275.6	7/20/01	7/26/01	4326.1	50.5
G6048725	6/22/01	6/25/01	4279.0	7/20/01	7/26/01	4321.5	42.5
G6048726	6/22/01	6/25/01	4279.2	7/20/01	7/26/01	4367.5	88.3
G6048727	6/22/01	6/25/01	4238.4	7/20/01	7/26/01	4283.0	44.6
G6048728	6/22/01	6/25/01	4267.5	7/20/01	7/26/01	4272.1	4.6
G6048729	6/22/01	6/25/01	4253.6				
G6048730	6/22/01	6/25/01	4280.3	7/29/01	8/6/01	4353.3	73.0
G6048731	6/22/01	6/25/01	4282.2				
G6048732							
G6048733							

2/27/02  
NEXT  
PAGE

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning				
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048702								
G6048703	6/8/01	6/12/01	4348.1	7/3/01	7/10/01	4396.3	48.2	
G6048704			4342.2	7/3/01	7/10/01	4419.8	77.6	
G6048705			4340.5	7/3/01	7/10/01	4427.9	87.4	
G6048706			4345.4	7/3/01	7/10/01	4450.3	104.9	
G6048707			4337.1	6/23/01	7/5/01	4333.7	-3.4	
G6048708			4349.5	7/6/01	7/17/01	4417.0	67.5	
G6048709			4359.0	7/6/01	7/17/01	4453.8	94.8	
G6048710			4367.7	7/6/01	7/17/01	4506.2	138.5	
G6048711			4347.4	7/6/01	7/17/01	4479.1	131.7	
G6048712			4328.9	7/6/01	7/17/01	4485.4	156.5	
G6048713			4325.3	7/3/01	7/10/01	4320.2	-5.1	
G6048714								
G6048715			4280.4	7/6/01	7/17/01	4281.4	1.0	
G6048716			4258.2	7/18/01	7/25/01	4416.3	158.1	
G6048717	6/8/01	6/12/01	4285.6	7/18/01	7/25/01	4348.3	62.7	

HIGHEST AND MOST  
QUALITY REPORTS

US EPA - AIRData Monitor Values Report

\* Wednesday, 26-Sep-2001 at 12:36:39 PM (USA Eastern time zone)  
 \* Monitor Values in Micrograms Per Cubic Meter of Air (ug/m3)  
 \* File Size : 36 Rows

\* Illinois Air Quality Monitors for Lead (All Years)  
 \* Counties Selected: Madison  
 \* File Format: TSV - Tab Separated Values

\* Field 1: No. of 24-hr Values  
 \* Field 2: 1st Max of 24-hr values  
 \* Field 3: 2nd Max of 24-hr values  
 \* Field 4: Qtr 1 Mean value  
 \* Field 5: Qtr 2 Mean value  
 \* Field 6: Qtr 3 Mean value  
 \* Field 7: Qtr 4 Mean value  
 \* Field 8: No. of Quarters Exceeding Standard  
 \* Field 9: Year  
 \* Field 10: City  
 \* Field 11: County  
 \* Field 12: State  
 \* Field 13: Region  
 \* Field 14: Monitor ID

58	0.38	0.36	0.10	0.07	0.13	0.09	0	1996	Granite City Madison Co IL	05	171190010-1
55	0.81	0.31	0.10	0.09	0.17	0.08	0	1997	Granite City Madison Co IL	05	171190010-1
58	0.49	0.31	0.10	0.08	0.06	0.10	0	1998	Granite City Madison Co IL	05	171190010-1
57	0.37	0.31	0.05	0.08	0.10	0.08	0	1999	Granite City Madison Co IL	05	171190010-1
59	0.51	0.17	0.08	0.05	0.08	0.07	0	2000	Granite City Madison Co IL	05	171190010-1
14	0.13	0.13	0.07	0.00	0.00	0.00	0	2001	Granite City Madison Co IL	05	171190010-1
61	0.40	0.14	0.05	0.07	0.06	0.07	0	1996	Granite City Madison Co IL	05	171190023-1
59	0.27	0.26	0.03	0.04	0.08	0.07	0	1997	Granite City Madison Co IL	05	171190023-1
57	0.31	0.25	0.04	0.06	0.07	0.08	0	1998	Granite City Madison Co IL	05	171190023-1
60	0.20	0.18	0.03	0.05	0.07	0.02	0	1996	Granite City Madison Co IL	05	17119007-1
60	0.21	0.19	0.02	0.03	0.06	0.07	0	1997	Granite City Madison Co IL	05	171191007-1
62	15.88	12.33	3.10	2.20	0.96	1.22	2	1996	Madison Co IL	05	171191012-1
65	11.19	10.80	1.08	1.16	1.08	2.11	1	1997	Madison Co IL	05	171191012-1
28	13.74	10.58	1.37	2.59	0.00	0.00	1	1998	Madison Co IL	05	171191012-1
60	8.38	7.53	1.40	0.71	0.72	1.20	0	1996	Madison Co IL	05	171191013-1
65	5.09	4.66	1.43	1.03	0.85	0.91	0	1997	Madison Co IL	05	171191013-1
58	5.39	5.06	0.70	0.33	0.15	0.58	0	1998	Madison Co IL	05	171191013-1
55	7.49	6.94	0.31	1.02	0.48	1.65	1	1999	Madison Co IL	05	171191013-1
60	7.68	5.32	0.98	0.76	0.06	1.57	1	2000	Madison Co IL	05	171191013-1
12	7.97	1.56	1.08	0.00	0.00	0.00	0	2001	Madison Co IL	05	171191013-1
62	6.25	5.51	0.56	0.88	0.64	1.11	0	1996	Madison Co IL	05	171191015-1
66	4.93	2.67	0.88	-0.44	0.24	0.27	0	1997	Madison Co IL	05	171191015-1
59	4.55	4.45	0.15	0.26	0.06	1.01	0	1998	Madison Co IL	05	171191015-1
57	7.54	4.66	0.60	0.75	0.44	1.10	0	1999	Madison Co IL	05	171191015-1
61	6.70	5.19	0.76	0.52	0.29	0.39	0	2000	Madison Co IL	05	171191015-1
16	1.68	1.31	0.40	0.00	0.00	0.00	0	2001	Madison Co IL	05	171191015-1
30	7.01	6.60	0.00	0.00	0.33	1.11	0	1998	Madison Co IL	05	171191016-1
59	13.42	9.12	1.34	0.97	0.61	2.50	1	1999	Madison Co IL	05	171191016-1
58	8.34	7.10	0.90	1.76	0.88	0.35	1	2000	Madison Co IL	05	171191016-1
14	9.35	3.26	1.20	0.00	0.00	0.00	0	2001	Madison Co IL	05	171191016-1
61	0.32	0.32	0.06	0.07	0.07	0.08	0	1996	Wood River Madison Co IL	05	171193007-2
57	0.44	0.34	0.04	0.07	0.10	0.08	0	1997	Wood River Madison Co IL	05	171193007-2
56	0.70	0.62	0.04	0.09	0.06	0.14	0	1998	Wood River Madison Co IL	05	171193007-2
58	0.65	0.33	0.06	0.04	0.11	0.10	0	1999	Wood River Madison Co IL	05	171193007-2
60	0.53	0.32	0.07	0.08	0.09	0.03	0	2000	Wood River Madison Co IL	05	171193007-2
14	0.15	0.13	0.05	0.00	0.00	0.00	0	2001	Wood River Madison Co IL	05	171193007-2

Site 1 - N. Chenoecto

Site 2 - E Chenoecto, Monitor 03

Chenoecto Site 4 - SE, Monitor 05

Site 5 - N. Chenoecto, Monitor 03



\* US EPA - AIRData Monitor Address Report  
 \* Thursday, 14-Jun-2001 at 8:55:45 AM (USA Eastern time zone)  
 \* Illinois Air Quality Monitors for Lead (All Years)

\* Counties Selected: Madison  
 \* File Size : 8 Rows  
 \* File Format: TSV - Tab Separated Values  
 \* Field 1: Region  
 \* Field 2: State  
 \* Field 3: County  
 \* Field 4: City  
 \* Field 5: Site Address  
 \* Field 6: Monitor Type  
 \* Field 7: Land Use  
 \* Field 8: Location Type  
 \* Field 9: Years  
 \* Field 10: Monitor ID  
 \* Field 11: Latitude (Degrees)  
 \* Field 12: Longitude (Degrees)

05	05	05	05	05	05	05	05	05	05	05
IL	IL	Madison Co	Granite City 15th & Madison	SLAMS	Industrial	Urban / Center City	1995 - 2000	171190010 - 1	38.6942	-90.1536
IL	IL	Madison Co	Granite City Vfw Building, 2044 Washington Ave	SLAMS	Industrial	Urban / Center City	1995 - 1998	171190023 - 1	38.6997	-90.1481
IL	IL	Madison Co	Granite City 23rd & Madison	SLAMS	Industrial	Urban / Center City	1995 - 1997	171191007 - 1	38.7044	-90.1394
IL	IL	Madison Co	Site 1 - N, Chemetco	Industrial	Rural	Rural	1995 - 1998	171191012 - 1	38.7992	-90.0992
IL	IL	Madison Co	Site 2 - E, Chemetco	Industrial	Rural	Rural	1995 - 2000	171191013 - 1	38.7953	-90.0928
IL	IL	Madison Co	Chemetco Site 4-Se	Industrial	Rural	Rural	1995 - 2000	171191015 - 1	38.7919	-90.0956
IL	IL	Madison Co	Site 5-N, Chemetco	Industrial	Rural	Rural	1998 - 2000	171191016 - 1	38.8000	-90.0992
IL	IL	Madison Co	Wood River 34 N, Walcott	SLAMS	Industrial	Suburban	1995 - 2000	171193007 - 2	38.8606	-90.1058



US EPA - AIRData Monitor Values Report

\* Wednesday, 26-Sep-2001 at 12:33:49 PM (USA Eastern time zone)  
 \* Monitor Values In Micrograms Per Cubic Meter of Air (ug/m3)  
 \* File Size : 37 Rows

\* Illinois Air Quality Monitors for Particulate Matter (All Years)  
 \* Counties Selected: Madison  
 \* File Format: TSV - Tab Separated Values

\* Field 1: No. of 24-hr Values  
 \* Field 2: 1st Max of 24-hr Values  
 \* Field 3: 2nd Max of 24-hr Values  
 \* Field 4: 3rd Max of 24-hr Values  
 \* Field 5: 4th Max of 24-hr Values  
 \* Field 6: Actual # of Exceedences  
 \* Field 7: Est. # of Exceedences  
 \* Field 8: Annual Mean  
 \* Field 9: Year  
 \* Field 10: City  
 \* Field 11: County  
 \* Field 12: State  
 \* Field 13: Region  
 \* Field 14: Monitor ID

58	139	59	56	53	0	0.0	28.7	1996	Alton	Madison Co IL	05	171190008 -1
60	82	76	66	64	0	0.0	29.6	1997	Alton	Madison Co IL	05	171190008 -1
60	66	64	60	58	0	0.0	31.8	1998	Alton	Madison Co IL	05	171190008 -1
54	64	59	55	52	0	0.0	27.8	1999	Alton	Madison Co IL	05	171190008 -1
61	77	77	76	65	0	0.0	39.4	1996	Granite City	Madison Co IL	05	171190010 -1
59	157	108	95	92	1	5.0	46.7	1997	Granite City	Madison Co IL	05	171190010 -1
60	152	121	92	85	0	0.0	46.0	1998	Granite City	Madison Co IL	05	171190010 -1
59	75	67	65	55	0	0.0	30.8	1999	Granite City	Madison Co IL	05	171190010 -1
58	88	82	70	65	0	0.0	36.2	2000	Granite City	Madison Co IL	05	171190010 -1
14	75	59	49	48	0	0.0	37.3	2001	Granite City	Madison Co IL	05	171190010 -1
60	74	62	61	55	0	0.0	29.1	1996	Granite City	Madison Co IL	05	171190022 -1
60	96	70	65	62	0	0.0	31.2	1997	Granite City	Madison Co IL	05	171190022 -1
57	73	67	66	56	0	0.0	31.6	1998	Granite City	Madison Co IL	05	171190023 -1
355	136	120	108	106	0	0.0	43.9	1999	Granite City	Madison Co IL	05	171190023 -1
327	119	118	117	114	0	0.0	45.8	2000	Granite City	Madison Co IL	05	171190023 -1
329	120	116	115	115	0	0.0	40.2	1996	Granite City	Madison Co IL	05	171190023 -2
364	118	107	102	99	0	0.0	36.8	1997	Granite City	Madison Co IL	05	171190023 -2
362	153	102	96	94	0	0.0	40.3	1998	Granite City	Madison Co IL	05	171190023 -2
353	136	120	108	106	0	0.0	43.9	1999	Granite City	Madison Co IL	05	171190023 -2
327	119	118	117	114	0	0.0	45.0	2000	Granite City	Madison Co IL	05	171190023 -2
339	120	116	115	115	0	0.0	34.7	1996	Granite City	Madison Co IL	05	171190023 -2
76	105	80	71	70	0	0.0	36.8	1997	Granite City	Madison Co IL	05	171190023 -2
365	118	107	96	94	0	0.0	35.3	1998	Granite City	Madison Co IL	05	171190023 -2
362	153	102	96	94	0	0.0	35.9	1999	Granite City	Madison Co IL	05	171190023 -2
76	105	80	71	70	0	0.0	38.0	2000	Granite City	Madison Co IL	05	171190023 -2
60	60	65	58	58	0	0.0	28.9	1996	Granite City	Madison Co IL	05	171190023 -3
60	119	83	71	70	0	0.0	31.6	1997	Granite City	Madison Co IL	05	171190023 -3
61	91	75	68	68	0	0.0	25.9	1998	Granite City	Madison Co IL	05	171190023 -3
59	52	50	50	50	0	0.0	24.6	1999	Granite City	Madison Co IL	05	171190023 -3
60	61	56	52	50	0	0.0	30.0	2000	Granite City	Madison Co IL	05	171190023 -3
60	50	47	47	46	0	0.0	29.3	1996	Granite City	Madison Co IL	05	171190023 -3
60	48	48	47	46	0	0.0	25.7	1997	Granite City	Madison Co IL	05	171190023 -3
57	59	56	55	53	0	0.0	20.2	1998	Granite City	Madison Co IL	05	171190023 -3
58	62	58	52	51	0	0.0	20.1	1999	Granite City	Madison Co IL	05	171190023 -3
60	99	76	53	23	0	0.0	20.1	2000	Granite City	Madison Co IL	05	171190023 -3
14	29	26	23	23	0	0.0	20.1	2001	Granite City	Madison Co IL	05	171190023 -3

\* US EPA - AIRData Monitor Address Report  
 \* Wednesday, 26-Sep-2001 at 12:35:26 PM (USA Eastern time zone)  
 \* Illinois Air Quality Monitors for Particulate Matter (All Years)  
 \*  
 \* Counties Selected: Madison  
 \* File Size : 7 Rows  
 \* File Format: TSV - Tab Separated Values  
 \* Field 1: Region  
 \* Field 2: State  
 \* Field 3: County  
 \* Field 4: City  
 \* Field 5: Site Address  
 \* Field 6: Monitor Type  
 \* Field 7: Land Use  
 \* Field 8: Location Type  
 \* Field 9: Years  
 \* Field 10: Monitor ID  
 \* Field 11: Latitude (Degrees)  
 \* Field 12: Longitude (Degrees)  
 \*  
 05 IL Madison Co Alton 409 Main St., Clara Barton School SLAMS Industrial Suburban 1996 - 1999 1711190008 - 1 38.8903 -90.1481  
 05 IL Madison Co Granite City 15th & Madison NAMIS Industrial Urban / Center City 1996 - 2001 1711190010 - 1 38.6942 -90.1536  
 05 IL Madison Co Granite City 15th & Madison SLAMS Industrial Urban / Center City 1998 - 2000 1711190010 - 1 38.6942 -90.1536  
 05 IL Madison Co Granite City 2420 Nameoki Rd, Plaza Furniture SLAMS Commercial Suburban 1996 - 1998 1711190022 - 1 38.7042 -90.1214  
 05 IL Madison Co Granite City Vfw Building, 2044 Washington Ave SLAMS Industrial Urban / Center City 1998 - 2000 1711190023 - 1 38.6997 -90.1481  
 05 IL Madison Co Granite City Vfw Building, 2044 Washington Ave Other SLAMS Industrial Urban / Center City 1996 - 2001 1711190023 - 2 38.6997 -90.1481  
 05 IL Madison Co Granite City Vfw Building, 2044 Washington Ave Other SLAMS Industrial Urban / Center City 1996 - 2001 1711190023 - 3 38.6997 -90.1481  
 05 IL Madison Co Granite City 23rd & Madison NAMIS Industrial Urban / Center City 1996 - 1997 1711191007 - 1 38.7044 -90.1394  
 05 IL Madison Co Granite City 23rd & Madison SLAMS Industrial Urban / Center City 1998 - 1998 1711191007 - 1 38.7044 -90.1394  
 05 IL Madison Co South Roxanna 211 Sinclair, City Hall SLAMS Commercial Urban / Center City 1996 - 1998 1711191011 - 1 38.8311 -90.8633  
 05 IL Madison Co Wood River 54 N. Walcott NAMIS Industrial Suburban 1996 - 2001 1711193007 - 1 38.8606 -90.1058  
 05 IL Madison Co Wood River 54 N. Walcott SLAMS Industrial Suburban 1998 - 2000 1711193007 - 1 38.8606 -90.1058

* US EPA - AIRData Monitor Values Report												
* Wednesday, 26-Sep-2001 at 12:33:49 PM (USA Eastern time zone)												
* Illinois Air Quality Monitors for Particulate Matter (All Years)												
* Monitor Values in Micrograms Per Cubic Meter of Air (ug/m3)												
* Counties Selected: Madison												
* File Size : 37 Rows												
* File Format: TSV - Tab Separated Values												
* Field 1: No. of 24-hr Values												
* Field 2: 1st Max of 24-hr Values												
* Field 3: 2nd Max of 24-hr Values												
* Field 4: 3rd Max of 24-hr Values												
* Field 5: 4th Max of 24-hr Values												
* Field 6: Actual # of Exceedences												
* Field 7: Est. # of Exceedences												
* Field 8: Annual Mean												
* Field 9: Year												
* Field 10: City												
* Field 11: County												
* Field 12: State												
* Field 13: Region												
* Field 14: Monitor ID												
58	139	59	56	53	0	0.0	28.7	1996	Alton	Madison Co IL	05	171190008 -1
60	82	76	66	64	0	0.0	29.6	1997	Alton	Madison Co IL	05	171190008 -1
60	66	64	60	58	0	0.0	31.8	1998	Alton	Madison Co IL	05	171190008 -1
54	64	59	55	52	0	0.0	27.8	1999	Alton	Madison Co IL	05	171190008 -1
61	77	77	76	65	0	0.0	39.4	1996	Granite City	Madison Co IL	05	171190010 -1
59	157	108	95	92	1	5.0	46.7	1997	Granite City	Madison Co IL	05	171190010 -1
60	152	121	92	85	0	0.0	46.0	1998	Granite City	Madison Co IL	05	171190010 -1
59	75	67	65	55	0	0.0	30.8	1999	Granite City	Madison Co IL	05	171190010 -1
58	88	82	70	65	0	0.0	36.2	2000	Granite City	Madison Co IL	05	171190010 -1
14	75	59	49	48	0	0.0	37.3	2001	Granite City	Madison Co IL	05	171190010 -1
60	74	62	61	55	0	0.0	29.1	1996	Granite City	Madison Co IL	05	171190022 -1
60	96	70	65	62	0	0.0	31.2	1997	Granite City	Madison Co IL	05	171190022 -1
57	73	67	66	56	0	0.0	31.6	1998	Granite City	Madison Co IL	05	171190022 -1
355	136	120	108	106	0	0.0	40.3	1998	Granite City	Madison Co IL	05	171190023 -1
327	119	118	117	114	0	0.0	43.9	1999	Granite City	Madison Co IL	05	171190023 -1
329	120	116	115	115	0	0.0	45.8	2000	Granite City	Madison Co IL	05	171190023 -1
364	118	107	102	99	0	0.0	40.2	1996	Granite City	Madison Co IL	05	171190023 -2
362	153	102	96	94	0	0.0	36.8	1997	Granite City	Madison Co IL	05	171190023 -2
353	136	120	108	106	0	0.0	40.3	1998	Granite City	Madison Co IL	05	171190023 -2
327	119	118	117	114	0	0.0	43.9	1999	Granite City	Madison Co IL	05	171190023 -2
339	120	116	115	115	0	0.0	45.0	2000	Granite City	Madison Co IL	05	171190023 -2
76	105	80	71	70	0	0.0	34.7	2001	Granite City	Madison Co IL	05	171190023 -2
365	118	107	102	99	0	0.0	40.2	1996	Granite City	Madison Co IL	05	171190023 -3
362	153	102	96	94	0	0.0	36.8	1997	Granite City	Madison Co IL	05	171190023 -3
76	105	80	71	70	0	0.0	35.3	2001	Granite City	Madison Co IL	05	171190023 -3
60	92	65	58	58	0	0.0	33.5	1996	Granite City	Madison Co IL	05	171191007 -1
60	119	83	71	70	0	0.0	35.9	1997	Granite City	Madison Co IL	05	171191007 -1
61	91	75	68	68	0	0.0	38.0	1998	Granite City	Madison Co IL	05	171191007 -1
60	60	53	51	49	0	0.0	27.4	1996	South Roxanna	Madison Co IL	05	171191011 -1
59	52	50	50	50	0	0.0	28.9	1997	South Roxanna	Madison Co IL	05	171191011 -1
60	61	56	52	50	0	0.0	31.6	1998	South Roxanna	Madison Co IL	05	171191011 -1
60	50	47	47	46	0	0.0	25.9	1996	Wood River	Madison Co IL	05	171193007 -1
60	48	48	47	46	0	0.0	24.6	1997	Wood River	Madison Co IL	05	171193007 -1
57	59	56	55	53	0	0.0	30.0	1998	Wood River	Madison Co IL	05	171193007 -1
58	62	58	52	43	0	0.0	25.7	1999	Wood River	Madison Co IL	05	171193007 -1
60	99	76	53	51	0	0.0	29.3	2000	Wood River	Madison Co IL	05	171193007 -1
14	29	26	23	23	0	0.0	20.2	2001	Wood River	Madison Co IL	05	171193007 -1

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF ILLINOIS

FILED

00 JAN -4 PM 6:25

UNITED STATES OF AMERICA,

Plaintiff,

CIV. NO. 93-482-WDS

v.

Judge Stiehl

CHEMETCO, INC.,

Defendant.

CONSENT DECREE

A. Plaintiff, United States of America, on behalf of the Administrator of the United States Environmental Protection Agency ("U.S. EPA"), filed a Complaint in this action against Defendant, Chemetco, Inc. ("Chemetco" or "Defendant"), alleging civil violations of the Clean Air Act, 42 U.S.C. §§ 7401 et seq. ("CAA" or "Act"), and the Federally approved and enforceable regulations comprising the State of Illinois Air Pollution Implementation Plan ("Illinois SIP"), codified at 40 C.F.R. § 52.720-52.742.

B. Pursuant to the authority of CAA Section 113(b), 42 U.S.C. § 7413(b), the Complaint seeks injunctive relief and the imposition of civil penalties for violations of the Act;

C. At all times relevant to the Complaint, Chemetco has been the "operator," within the meaning of CAA Section 113, 42 U.S.C. § 7413, of a secondary copper smelter at a Facility located on Illinois Route 3 at Oldenburg Road, City of Hartford, Madison County, Illinois;

D. The Facility is a "stationary source" within the meaning of CAA Section 302(z), 42 U.S.C. § 7602(z), because it emits lead and particulate matter into the environment;

E. Illinois Pollution Control Board ("IPCB") Rule 101 defines "existing emission source" as any emission source, the construction or modification of which commenced prior to May 31, 1972, the effective date of IPCB Rule 101. See 35 Ill. Adm. Code § 212.322;

F. The Facility has been a "major stationary source" as defined in CAA Section 302(j), 42 U.S.C. § 7602(j), because it has emitted more than one hundred tons per year of an air pollutant;

G. Defendant's secondary copper smelter at the Facility is comprised, in part, of four furnaces ("Furnace Nos. 1, 2, 3, and 4") (also known as "converters"), which process scrap materials (including brasses and bronzes that contain lead) and which generate particulate matter emissions in varying amounts.

H. Furnace Nos. 1, 2, and 3 at the Facility were operated prior to May 31, 1972, and are "existing emission sources" within the meaning of the IPCB Rule 101, 35 Ill. Adm. Code § 212.322.

I. IPCB Rule 101 defines "new emission source" as any emission source the construction or modification of which commenced after May 31, 1972, the effective date of IPCB Rule 101. See 35 Ill. Adm. Code § 212.321.

J. Furnace No. 4 at the Facility was constructed after May 31, 1972, and is a "new emission source" within the meaning of the IPCB Rule 101, 35 Ill. Adm. Code § 212.321.

K. IPCB Rule 103 prohibits any person from causing or allowing the operation of any new emission source or new air pollution control equipment, for which a construction permit is required by IPCB Rule 103, without first obtaining an operating permit from IEPA. See 35 Ill. Adm. Code § 201.143.

L. As discussed in detail herein, as part of this settlement, Chemetco has agreed to install and operate a continuous particulate mass monitoring system ("CPMMS") at its Facility. The parties agree that the purposes of such system include, but are not limited to:

Providing Chemetco with near real time emissions data for improving operation and maintenance of the Furnaces and the associated air pollution control devices at the Facility;

Minimizing the number of required stack tests that would otherwise be necessary for determining "continuous compliance;"

Providing Chemetco and U.S. EPA with continuous particulate mass emissions information in standard units of measurement, thereby minimizing reliance on surrogate measurements of emissions from the Facility's emission points (stacks), such as opacity and pressure drop across control devices, that have been contested in other cases as not accurately reflecting the existence of particulate limit excursions; and

Providing an agreed source of credible evidence for demonstrating continuous compliance with particulate emission limits.

M. Chemetco previously paid the State of Illinois a total of \$305,000 in settlement of some of the violations set forth in the United States' Complaint.

N. The parties recognize and the Court, by approving and entering this Consent Decree, finds that this Consent Decree has been negotiated by the Parties in good faith, and implementation of this Consent Decree will avoid prolonged and complicated litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, IT IS ADJUDGED, ORDERED, AND DECREED THAT:

#### **I. JURISDICTION AND VENUE**

1. The Complaint in this action states a claim upon which relief can be granted under the Act.



2. This Court has jurisdiction over the subject matter and parties to this action pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

3. Venue properly lies in this Judicial District under 28 U.S.C. §§ 1391(b) and 1395(a).

## II. DEFINITIONS

4. The terms used in this Consent Decree that are defined in the Clean Air Act, 42 U.S.C. §§ 7401 et seq., and the Federally approved and enforceable regulations comprising the Illinois SIP, 40 C.F.R. §§ 52.720-52.742, have the meanings contained therein.

5. Whenever the terms listed below are used in this Consent Decree or in any of the Appendices hereto the following definitions shall apply:

- a. "Defendant" shall mean "Chemetco, Inc." or "Chemetco;"
- b. "BACT" shall mean "Best Available Control Technology," as defined in Clean Air Act Section 169(3), 42 U.S.C. § 7479(3);
- c. "Clean Air Act," "Act" and "CAA" shall mean the Clean Air Act, 42 U.S.C. § 7401, et seq.;
- d. "Consent Decree" shall mean this Consent Decree and all appendices hereto, including all modifications to the Consent Decree that are made pursuant to Paragraph 55 hereof;
- e. "Continuous Particulate Mass Monitoring System" or "CPMMS" shall mean the system that measures the particulate matter that is released from the emission points (stacks) at the Hartford Facility into the ambient air: the system includes, but is not limited to, a continuous

particulate mass monitor (Mass Monitor), and a monitoring device or system for measuring or computing the exhaust gas flow on an hourly basis (Flow Monitor);

f. "Daily Weighted Average" shall mean the average of the zinc and/or lead percentages of all the Furnace Charges in one day, taking into account the weight of the material comprising each Furnace Charge;

g. "Direct Injection System" or "DI System" shall mean the system by which copper bearing fines are injected directly into a Furnace: the system includes the conveyor system, sizing machine, kiln dryer, pneumatic transporters, storage silo, and a large injector;

h. "Facility" or "Plant" shall mean Defendant's secondary copper smelter, and all associated processing, transfer, storage operations and equipment located on Illinois Route 3 at Oldenburg Road, City of Hartford, County of Madison, State of Illinois;

i. "Fines" shall mean all scrap materials acquired at the Facility that are stored, dried, screened or processed in any way for direct injection through the DI System into any of the Furnaces;

j. "Foundry" shall mean the building in which the Hartford Facility's Furnaces are located;

k. "Furnace" shall mean any rotary copper smelting device at the Facility;

l. "Furnace Charge" or "Charge" shall mean any material placed into a Furnace for processing;

m. "Furnace Mode" or "Mode" shall mean any of the four phases of processing in any Furnace, which include Slag Treatment (Mode 1); Refining (Cold Charge) (Mode 2); Smelting

(Smelt) (Mode 3); and Injection (Mode 4);

n. "IEPA" shall mean the State of Illinois Environmental Protection Agency and any successor departments or agencies of the State of Illinois;

o. "Illinois SIP" shall mean the State of Illinois Air Pollution Implementation Plan, codified at 40 C.F.R. §§ 52.720-52.742;

p. "PCB" shall mean the State of Illinois Pollution Control Board;

q. "Malfunction" shall mean any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions (See 40 C.F.R. § 60.2);

r. "National Ambient Air Quality Standards" or "NAAQS" shall mean the standards set forth at 40 C.F.R. §§ 50.1-50.12;

s. "Paragraph" shall mean a portion of this Consent Decree designated by an Arabic numeral outside of a parentheses, e.g., "19";

t. "Pressure Drop" shall mean the decrease in pressure between two monitoring points;

u. "Pressure Drop Monitor" shall mean any device(s) installed and operated to determine the Pressure Drop that occurs between any two points;

v. "Process Weight" shall mean the total weight in pounds, of all material charged to a Furnace during a Furnace Mode;

w. "Process Weight Rate" shall have the same meaning as set forth in 35 Ill. Adm.

Code § 211.122. See also 35 Ill. Adm. Code Part 266;

x. "Raw Material Data Base" shall mean the record keeping system whereby the pertinent information concerning all raw material received at the Facility for processing in the refining and/or smelt/slag treatment modes is logged and maintained;

y. "Recipe" shall mean the chemical composition of a Furnace Charge or Smelting Heat;

z. "Residue" shall mean any material remaining in a Furnace after completion of a Furnace Mode;

aa. "Secondary Capture System and Control Device" shall mean the hood, duct work, fans, and baghouse that control all fugitive emissions that escape from the Furnaces or are otherwise produced by activities in the Facility;

bb. "Smelting Heat" shall mean one or more Furnace Charges excluding any Residue in that Furnace from any previous smelting mode processed in that furnace;

cc. (1) "Stack Test" shall mean a measurement of the amount of any pollutant including, but not limited to, particulate matter and lead, emitted by a source of air emissions, that is conducted in accordance with U.S. EPA-approved test methods found at 40 C.F.R. Part 60, Appendix A;

(2) "Baseline Stack Test" shall mean the initial testing of combined Furnace Nos. 1 and 3, and combined Furnace Nos. 2 and 4, and/or combined Furnace Modes for those units, following any modification to the process and/or air pollution control equipment;

dd. "State" shall mean the State of Illinois and all its departments, agencies and

instrumentalities;

ee. "United States" shall mean the United States of America and all its departments, agencies and instrumentalities;

ff. "U.S. EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

### **III. APPLICABILITY**

6. The provisions of this Consent Decree shall apply to and be binding upon Defendant and Defendant's agents, officers, directors, employees, successors, assigns, contractors, and consultants solely in their capacities as such. Defendant shall be responsible for the acts of its agents, officers, directors, employees, successors, assigns, contractors, and consultants, who violate, cause or permit Defendant to violate the terms of this Consent Decree.

7. No change in ownership or corporate status shall in any way alter the responsibilities of Defendant under this Consent Decree. In the event of any conveyance of title, easement, or other interest in the Facility, Defendant shall continue to meet all obligations under this Consent Decree.

8. In the event that Defendant proposes to sell or transfer any real property or operations subject to this Consent Decree, Defendant shall notify U.S. EPA and IEPA in the manner specified in 40 C.F.R. § 270.72(a) prior to the conveyance of title, easement, or any other interest, including a leasehold interest. Defendant shall make the purchasing party's compliance with the Consent Decree a condition of any sale of any portion of the Hartford Facility that is subject to this Consent Decree.

9. Defendant shall notify each contractor retained to perform work required by this

Consent Decree of each of the requirements of this Consent Decree relevant to the activities to be performed by that contractor, including all relevant work schedules and reporting deadlines. Defendant shall further require that each such contractor notify in writing each subcontractor retained to perform work required by this Consent Decree of the requirements of this Consent Decree applicable to the work to be performed by such subcontractor.

10. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of the Defendant's officers, directors, employees, agents, servants, and successors and assigns to take actions necessary to comply with the provisions hereof. Nothing in this Paragraph shall diminish the Defendant's rights under Section XIV (Force Majeure) or any other available legal defenses.

#### **IV. CLEAN AIR ACT COMPLIANCE**

11. **Buildings and Sheds**

- a. Defendant operates on the west side of the Facility's Dust Injection System Hall, an approximately 50,000 square foot building dedicated to the storage of fines ("Fines Building").
- b. Any fines not stored in the Fines Building shall be stored in another building or a closed container.
- c. Beginning with the date of entry of this Consent Decree, Defendant shall not charge materials purchased as fines to any Furnace by any means other than the Dust Injection System.
- d. Defendant shall pay a stipulated penalty of \$500 per day for any violations of any provision of this Paragraph.

12. Designated Modes of Furnace Operation

- a. Defendant has designated each of its four Furnaces to operate in specific process Modes, as follows: Mode 1 - Slag Treatment; Mode 2 - Refining (Cold Charge); Mode 3 - Smelting (Smelt); and Mode 4 - Injection.
- b. Defendant's operations shall comply with the production process depicted on the chart at Appendix A.
- c. Defendant shall limit production for all four of its Furnaces to 900 tons per day: Provided, should Defendant, at its discretion, utilize fewer than four Furnaces at any one time, Defendant's daily maximum production shall be equal to the maximum capacity of the Furnaces being utilized, as depicted on the chart at Appendix A.

13. Fugitive Emissions Control.

- a. Defendant shall comply with all the terms of the Facility's IEPA-approved Fugitive Emissions Control Program dated September 1993, as revised (incorporated herein by reference). Specifically, Defendant shall:
  - (1) continue to implement all measures as outlined in the approved Fugitive Emissions Control Program;
  - (2) maintain daily records of all actions taken pursuant to the approved Fugitive Emissions Control Program and the results thereof. Daily records shall be retained for a period of five (5) years; and
  - (3) submit to IEPA and U.S. EPA within seven (7) working days of the end of each calendar month a fugitive emissions report, which shall contain any and all records



indicating or demonstrating the Defendant's failure to adhere to the approved fugitive emissions control program, including, but not limited to, the dates of such failure, the duration of such failure, the reasons for such failure, and all actions taken to correct such failure.

b. The results of the fugitive emissions control program shall be available for inspection and copying by IEPA and U.S. EPA; and

c. Upon demand by U.S. EPA, Defendant shall pay a stipulated penalty of \$500 per day for each day that a fugitive emission report is not timely submitted, and \$1,000 per day for each day that such a submitted report fails to contain any information required by Paragraph 13.a.(3). Upon receipt of a fugitive emission report indicating that Defendant has failed to comply with the Fugitive Emissions Control Program, U.S. EPA, taking into consideration the factors set forth in Paragraph 13.a.(3), may demand that Defendant pay a stipulated penalty of \$500 per day for each violation set forth in the report.

14. Furnace Emission Limitations

a. Furnace Nos. 1, 2, and 3 at the Facility were operated prior to May 31, 1972, and are "existing emission sources" within the meaning of IPCB Rule 101, 35 Ill. Adm. Code § 212.322. Furnace No. 4 at the Facility was constructed after May 31, 1972, and is a "new emission source" within the meaning of IPCB Rule 101, 35 Ill. Adm. Code § 212.321. However, under Defendant's current operational and emissions control programs, Furnace No. 1 is paired with Furnace No. 3 as a "Process Emission Unit" (discussed in more detail in the CPMMS Protocol (Appendix D)) and Furnace No. 2 is paired with Furnace No. 4 as a "Process Emission Unit." As such, for purposes of this Consent Decree only, the combined emissions from Furnace Nos. 1 and 3 will be subject to 35



Ill. Adm. Code § 212.322, and the combined emissions from Furnace Nos. 2 and 4 will be subject to 35 Ill. Adm. Code § 212.321. Chemetco, at its discretion, may separate Furnace Nos. 2 and 4, with the result that the emission limit for Furnace No. 2 would once again be subject to 35 Ill. Adm. Code § 212.322: Provided, such action may be undertaken only in accordance with the Clean Air Act and its implementing regulations, including the State of Illinois SIP, 40 C.F.R. § 52.720-52.742.

b. Defendant shall comply with each of the following emission limitations at all times.

(1) The opacity limitation for visible emissions from each Furnace's control device, vent, or emission point (stack), as required by 35 Ill. Adm. Code § 212.123(a);

(2) The total particulate emissions limitation for each Process Emissions Unit (as established pursuant to 35 Ill. Adm. Code § 212.321 or § 212.322, as applicable. See Paragraph 14.a.) during each process mode, including Furnace charging and tapping emissions.

c. The Process Weight Rate calculation shall not include the Residue as part of the Furnace Charge.

d. During any 12-month period described in Paragraph 20.a., Defendant shall be subject to stipulated penalties of \$500 per day for each day of violation of Paragraph 14.b.(1) not caused by a Malfunction.

15. Secondary Capture System and Control Device

a.(1) Within 60 days following the entry of this Consent Decree, Defendant shall submit for U.S. EPA's review and approval a detailed proposal for assessing and/or improving the efficiency of the Secondary Capture System and Control Device for the Foundry. The proposal shall

address the various components of the Foundry, including, but not limited to, the integrity of the roof, supporting structure, walls, duct work and baghouse.

(2) Defendant shall complete the assessment within 120 days of Defendant's receipt of U.S. EPA's written approval of the assessment proposal.

(3) A report of the results of the assessment shall be submitted to U.S. EPA and IEPA within thirty (30) calendar days following completion of the assessment. The report shall include modification descriptions, schedules for implementation, and cost estimates.

b. Defendant shall operate the Secondary Capture System and Control Device in a manner that meets all applicable emission limitations, including the opacity limitation for visible emissions as required by 35 Ill. Adm. Code § 212.123(a).

c. Within 180 days following entry of this Consent Decree, Defendant shall install pressure drop monitors for each of the eight compartments of the baghouse.

(1) Defendant shall insure that each pressure drop monitor includes a continuous monitoring and recording device that allows pressure drop monitoring of the baghouse compartments by the operators in the control room.

(2) Defendant shall establish a baseline range of operation for pressure drop, and operate the baghouse at all times within the baseline range.

(3) Defendant shall record and maintain at the Facility, for three years after installation of the last installed pressure drop monitor, the date, time, and duration, of all time periods that the baghouse operates outside of the baseline range, and the cause of and methods used to correct such deficiency.



d. Beginning 240 days following the entry of this Consent Decree, Defendant shall achieve and maintain zero visible fugitive emissions from the Foundry.

e. A violation of any provision of this Paragraph not caused by a Malfunction shall subject Defendant to stipulated penalties of \$500 per day for each violation.

16. Baseline Stack Testing

a. Baseline Stack Testing shall be performed for all mode scenarios depicted on the chart at Appendix A pursuant to the Stack Test Protocol set forth in Appendix B.

b. Within 30 days following U.S. EPA's certification of the Continuous Particulate Mass Monitor System under Paragraph 18.c., Defendant shall conduct the Baseline Stack Tests on its Furnaces.

c. During the Baseline Stack Tests, Defendant shall confirm the calibration curve for the Continuous Particulate Mass Monitoring System installed and certified pursuant to the Continuous Mass Monitoring Plan required by Paragraph 18.a.

d. Defendant shall establish baseline operating ranges of pressure drop for the control device systems of each Furnace and of scrubbing nozzle pressure for all new active air pollution control equipment.

e. Defendant may establish new baseline operating ranges for the control devices during subsequent Stack Tests, if any, provided the Stack Tests indicate compliance with all applicable limits. U.S. EPA shall be notified of any additional Stack Tests sixty (60) days prior to commencement of such tests.

f. Defendant shall require its contractor(s) to submit the results of, and a final

report on, all Stack Tests to IEPA and U.S. EPA at the same time that the contractor(s) submits such results and report to Defendant, but not later than thirty (30) days after completion of each Stack Test.

Defendant's Stack Test results and final report shall include the following for each test run:

- (1) The Mode being tested;
- (2) The Process Weight Rate with supporting calculations;
- (3) The allowable particulate matter emission rate in pounds per hour (lbs/hr), calculated pursuant to Paragraph 14.b.(2) of this Consent Decree.
- (4) For Baseline Stack Tests, the actual controlled emissions rate of particulate matter;
- (5) The actual concentration of particulate matter in pounds per day; and
- (6) Copies of the continuous monitoring charts for pressure drops and scrubbant nozzle pressure rates across each control device.

g. Defendant shall allow IEPA and U.S. EPA, without warning or advance notice, to inspect the Furnace Charges and conduct any sampling of the Charges that either IEPA or U.S. EPA deems necessary during Stack Tests.

h. Defendant shall pay stipulated penalties of \$1,000 per day per Furnace for each day that:

- (1) A Baseline Stack Test is not completed in a timely manner; and
- (2) A stack test report is not timely submitted, or fails to contain any information required by the Stack Test Protocol (Appendix B) or Paragraph 16.f, respectively, of this Consent Decree.



17. Raw Materials Management System.

a. Within 180 days following the entry of this Consent Decree, Defendant, in accordance with the Raw Materials Management System Protocol (Appendix C), shall develop, utilize and maintain a computer-based Raw Material Data Base Program to calculate and record the Daily Weighted Average of zinc and lead percentages for each recipe for each Furnace Charge.

b. Defendant shall pay stipulated penalties of \$500 per day for each violation of Paragraph 17.a.

18. Continuous Mass Monitoring of Particulates. The schedule and enforcement methodology set forth in this Paragraph shall apply to Defendant's installation and utilization of a Continuous Particulate Mass Monitoring System ("CPMMS"). Such a monitoring system has not previously been utilized in the United States on a system similar to Chemetco's.

a. Within 120 days following the entry of this Consent Decree, Defendant shall submit for review and approval by U.S. EPA a Continuous Particulate Mass Monitoring Plan. Such plan shall satisfy all the elements of the protocol for installing, certifying, operating, maintaining, and reporting from the CPMMS. (See Appendix D).

b. Within 60 days following Defendant's receipt of U.S. EPA's approval of the plan submitted pursuant to Paragraph 18.a., Defendant shall install, calibrate, operate and maintain a CPMMS on each of the emission points (stacks) servicing the Facility's four Furnaces and their air pollution control devices. Defendant also shall provide a means of computing and recording the allowable particulate emission rate in pounds per hour for each "Process Emission Unit" using the equations set forth at 35 Ill. Adm. Code §§ 212.321 and 212.322, as applicable. See Paragraph 14.a.

c. Within 30 days following the first day of operation of the CPMMS, Defendant shall perform certification tests and, within 30 days following completion of such tests, Defendant shall provide to U.S. EPA, for purposes of U.S. EPA's approval and certification of the CPMMS, all data (including all test results) developed by Defendant to demonstrate that the CPMMS satisfies all of the certification requirements set forth in the CPMMS Protocol (Appendix D).

d. After the CPMMS is operational on each of the Facility's emission points (stacks) and certification testing is completed, Defendant shall demonstrate continuous compliance with the emission limits established pursuant to Paragraph 14.b.(2) of this Consent Decree, using the emission measurements provided by the CPMMS.

e. No later than the 30 days following the last day of each calendar quarter, starting with the calendar quarter in which U.S. EPA certifies the CPMMS, Chemetco shall submit to U.S. EPA and IEPA a report, using the data obtained from the CPMMS (in standard units of measure and the appropriate averaging time), of all one-hour periods of emissions that are in excess of the emission limitations established pursuant to Paragraph 14.b.(2) of this Consent Decree. Each such report shall include the date, time and magnitude of excess particulate emissions, statements as to the probable cause of the excess emissions, descriptions of the corrective action(s) that may have been undertaken by Chemetco, and information as to the periods of and reasons for non-operation or malfunction of the CPMMS, if appropriate.

f. Until this Consent Decree is terminated, U.S. EPA will review and evaluate the excess emission reports required by subparagraph "e" of this Paragraph, and any other monitoring reports or incident reports provided to U.S. EPA by Defendant, and will determine, based on those



reports, whether violations of this Paragraph have occurred. Provided, recorded and reported excess emissions solely attributable to a malfunction of the CPMMS shall not form the basis of a claim for stipulated penalties under this Consent Decree.

g. Chemetco shall be subject to a stipulated penalty of \$500 per day for violations of any provision of this Paragraph.

19. Election of Optional Stack Testing and Potential Operational Restrictions. The following provisions shall apply to the performance of stack tests if either party concludes that the CPMMS or the data derived therefrom is unreliable:

a. At any time following 180 days after the U.S. EPA's certification of the CPMMS under Paragraph 18.c., U.S. EPA may require, or Defendant at its discretion may perform, a Stack Test on a particular emission point (stack) if:

(1) U.S. EPA has demanded stipulated penalties under Paragraph 18.f. for more than two consecutive calendar quarters;

(2) the CPMMS for a particular stack has malfunctioned for more than 25% of the calendar quarter; or

(3) U.S. EPA and Defendant disagree on the validity of the information set forth in the reports required under Paragraph 18.e. of this Consent Decree.

b. Should U.S. EPA require the performance of Stack Tests under the provisions of Paragraph 19.a., such Stack Tests shall be initiated within 60 days following Defendant's receipt of U.S. EPA's written notification that Stack Tests must be conducted.

c. The provisions of Paragraph 16.f. and 16.g. of this Consent Decree,

applicable to Baseline Stack Tests, shall apply equally to any Stack Tests that may be performed under this Paragraph.

d. Should a Stack Test conducted under this Paragraph demonstrate that a combination of Furnace Modes has exceeded an emission limitation for a Process Emission Unit established pursuant to Paragraph 14.b.(2) of this Consent Decree, and such exceedance is not the result of a Malfunction, Defendant shall stop operation of such Furnace Mode combination immediately upon receipt of the Stack Test results (but no later than fifteen (15) days after the last Stack Test date) except that:

(1) Defendant, upon written concurrence of U.S. EPA, may engage in full operation of the subject Furnace Mode combination, without incurring a penalty, only for the purposes of conducting retests to identify which Furnace Mode or Modes caused the emissions limitation to be exceeded, and the emissions reduction impact of remedial measures or changes to Furnace Charges: Provided, operations under this subparagraph shall not exceed fourteen (14) days without the written approval of U.S. EPA;

(2) If a Furnace Mode combination is shut down or its operations restricted pursuant to this Paragraph, unlimited operation of the subject Furnace shall not recommence until all of the following occur:

(a) Defendant certifies to IEPA and U.S. EPA that it has completed construction of or improvements to the air pollution control devices or changes in Charges;

(b) U.S. EPA receives the results of completed emissions tests that demonstrate compliance with the emissions limitations established pursuant to Paragraph 14.b.(2) of



this Consent Decree, and

(c) Defendant pays any stipulated penalty that may have accrued under this Paragraph.

e. Defendant shall pay stipulated penalties of:

(1) \$500 for each day that a Stack Test, the performance of which is required by U.S. EPA under Paragraph 19.a., is not timely conducted, beginning on the 60th day following Chemetco's receipt of a written notification under Paragraph 19.b.;

(2) \$2500 per day for violations of Paragraph 19.d.

20. Governance of Stack Test Data Instead of CPMMS Data.

a. If either U.S. EPA or Chemetco elects to impose a Stack Test requirement pursuant to Paragraph 19.a, the data generated through such Stack Tests (as opposed to any data generated by the CPMMS) shall govern, for a period of 12 months beginning on the date that U.S. EPA receives the Stack Test report (See Paragraphs 16.f. and 19.c.) , Chemetco's compliance with the emission limitations established pursuant to Paragraph 14.b.(2) of this Consent Decree.

b. During any 12-month period described in Paragraph 20.a. , Defendant shall ensure that the Daily Weighted Average of lead and zinc percentages of each charge, as maintained in the Raw Material Data Base, do not exceed those percentages determined for each of the materials utilized to create the Recipes for Furnace Charges processed during the Stack Tests demonstrating compliance with air emissions limitations established pursuant to Paragraph 14.b.(2) of this Consent Decree.

c. (1) Defendant has installed new air pollution control devices on the

emission points (stacks) for the Hartford Facility's four rotary Furnaces.

(2) Defendant has equipped each new air pollution control device with appropriate monitoring and recording devices, including, but not limited to:

(a) continuous pressure drop monitors and recording devices for all new active air pollution control equipment; and

(b) continuous scrubbant nozzle pressure monitors and recording devices for all new active air pollution control equipment.

d. During any 12-month period in which stack test data shall govern Defendant's compliance with the limitations established pursuant to Paragraph 14.b.(2) of this Consent Decree (See Paragraph 20.a.), the data derived from the monitors described in preceding Paragraph 20.c.(2)(a) and (b) shall be used in lieu of the data derived from the CPMMS to assess Defendant's compliance with the limitations established pursuant to Paragraph 14.b.(2) of this Consent Decree.

e. Defendant shall operate the control device systems at all times following the initial baseline stack tests within the established baseline operating ranges

f. Defendant shall calibrate, operate, and maintain all new air pollution control devices and all continuous monitoring and recording devices in a manner that ensures accurate and precise operation.

g. During any 12-month period in which stack test data shall govern Defendant's compliance with the limitations established pursuant to Paragraph 14.b.(2) of this Consent Decree (See Paragraph 20.a.), Defendant shall collect and record the following information for each new air pollution control device system as each such device becomes operational:

(1) Continuous pressure drop monitoring data and continuous scrubbant nozzle pressure monitoring data;

(2) Operating times for each Furnace control device system, associated monitoring equipment, and each Furnace;

(3) Records of all routine and non-routine maintenance performed on each control device system and associated monitoring equipment, including dates and duration of any outages; and,

(4) The date, duration, cause, and response to all periods of operation during which the pressure drop of the control device system is outside of the baseline range established during the baseline stack test.

h. Defendant shall maintain for at least three years the information collected pursuant to Paragraph 20.g.

i. Defendant shall pay stipulated penalties of \$500 per day for each violation of any provision of Paragraph 20.e. thru 20.h.

21. Maintenance of Ambient Air Quality Standard

a. Beginning with the first full calendar quarter following entry of this Consent Decree, Defendant shall not violate any applicable ambient air quality standard for lead or particulate matter required by IPCB Rule 102 (See 35 Ill. Adm. Code §§ 243.126, 243.108), as demonstrated by the approved ambient air monitoring program at the Facility.

b. Defendant shall carry out immediately and in their entirety the terms of the Facility's IEPA-approved Ambient Air Monitoring Program dated August 1993, as revised (which is

incorporated herein by reference), including but not limited to:

- (1) Compliance with all requirements for sampling, validation, location, analysis, operating procedures, maintenance, calibration, data reduction, reporting, quality assurance, monitoring methodology, and instrumentation;
- (2) Collection of enough samples to ensure the compilation of valid quarterly emissions data, as set forth in the terms of the approved ambient air monitoring program;
- (3) Refraining from any and all actions that could potentially undermine the efficiency or accuracy of the approved ambient air monitoring program, including but not limited to the construction, placement or use of water screens or spraying devices at or near the Facility's ambient air monitors;
- (4) Not moving the Facility's ambient air monitors, without prior written approval from IEPA and U.S. EPA;
- (5) Not deviating from the approved ambient air monitoring program without prior written approval from IEPA and U.S. EPA; and
- (6) Continuing to submit the results of the ambient air monitoring program to IEPA and U.S. EPA on a quarterly basis within thirty (30) calendar days of the end of each quarter.

c. Defendant shall continue the approved ambient air monitoring program until:

- (1) Defendant demonstrates to IEPA and U.S. EPA that it has been in compliance with the NAAQS for lead for a period of twelve (12) consecutive calendar quarters after entry of this Consent Decree; and
- (2) Defendant receives written notice from U.S. EPA that Defendant may

cease the approved ambient air monitoring program.

d. Defendant shall pay the stipulated penalties set forth below for violations of the provisions of this Paragraph not caused by a Malfunction:

(1) \$1,000 for each violation of a quarterly NAAQS arithmetic mean limitation;

(2) \$5,000 for each violation of an annual NAAQS arithmetic mean limitation; and

(3) \$1,000 per day for each day that Defendant fails to comply with the approved ambient air monitoring program.

#### **V. AUDIT REQUIREMENTS**

22. Nothing in this Consent Decree shall be construed to limit or otherwise affect the right of U.S. EPA to conduct and resolve any audit, or render any report authorized pursuant to the Inspector General Act of 1978, Pub.L. 95-452, Oct. 12, 1978, 92 Stat. 1101, as amended, 5 U.S.C. App. 3.

#### **VI. CIVIL PENALTY**

23. Defendant shall pay a civil penalty in the amount of \$305,267 in full satisfaction of the United States' claims for civil penalties as alleged in the Complaint through the date of lodging of this Consent Decree, recognizing that Defendant has previously paid \$305,000 to the State of Illinois. Defendant shall pay \$150,000 of the civil penalty amount within thirty (30) days following the date of entry of this Consent Decree, and shall pay the remaining \$155,267 within 12 months of the date of the first payment. The payments will be made by Fed Wire Electronic Funds Transfer ("EFT") to the

Department of Justice Lockbox Bank in accordance with specific instructions to be timely provided to Defendant upon entry of this Consent Decree and will reference DOJ Case No. 90-5-2-1-1845; United States Attorney, Southern District of Illinois, File No. 1998V00228. Funds received at the Lockbox Bank after 11:00 a.m. (Eastern Time) will be credited on the next business day. Defendant will advise the Financial Litigation Unit of the United States Attorney's Office for the Southern District of Illinois at the time payment is being wire-transferred. In addition, Defendant will confirm to U.S. EPA and the Department of Justice that payment has been made in accordance with Section X (Notices and Submissions). Interest and late charges will be paid as specified in Paragraph 24.

24. Commencing thirty (30) days after the date this Consent Decree is entered, interest shall accrue on the penalty, or any portion thereof that is overdue, at the rate set by 31 U.S.C. § 3717 and shall continue to accrue until the penalty is paid. A late payment handling charge of \$20.00 shall be imposed after thirty (30) days, with an additional charge of \$10.00 for each subsequent thirty (30) day period over which an unpaid balance remains. In addition, a six (6) percent per annum penalty shall be applied on any principal amount not paid within ninety (90) days of the entry of this Consent Decree.

25. Upon entry of this Consent Decree, the civil penalty provided for in this Section shall be a debt owed to the United States. Collection of this debt shall be subject to the Federal Debt Collection Procedures Act, 28 U.S.C. § 3001 *et seq.*

26. Chemetco shall not deduct its payment of the civil penalty provided for in this Section for any tax purpose or otherwise obtain any favorable tax treatment of, or for, such civil penalty payment.



## **VII. STIPULATED PENALTIES**

27. The stipulated penalties herein shall be in addition to, and shall in no way limit, other remedies or sanctions available to the United States by reason of the Defendant's failure to comply with the requirements of this Consent Decree, the CAA or the Illinois SIP. However, if the United States collects a stipulated penalty from the Defendant under this Consent Decree and subsequently seeks and is awarded a monetary penalty under the CAA or the Illinois SIP for the same act or omission, the Defendant shall receive a credit against the judgment for the amount of the paid stipulated penalty.

28. Failure by the United States to demand stipulated penalties shall have no effect on the accrual of such penalties.

29. a. Stipulated penalties are due by the 15th day of the month following the month in which the violations occurred or in which U.S. EPA made a stipulated penalty demand under the provisions of this Consent Decree.

b. Payments of Stipulated Penalties shall be made in accordance with the procedures set forth in Paragraph 23.

c. At the same time Defendant submits a payment of stipulated penalty, Defendant shall send a letter to U.S. EPA, the U.S. Department of Justice, and IEPA notifying those entities of the payment of the stipulated penalty and identifying the case name, court, docket number, specific stipulated penalty provision involved, and a description of the violations of this Consent Decree for which the stipulated penalties were tendered.

d. The United States may, in its discretion and not subject to judicial review,

determine that stipulated penalties for violations of any provision of this Consent Decree need not be paid.

30. Any dispute with respect to Defendant's liability for a stipulated penalty shall be resolved by this Court pursuant to the dispute resolution provisions of Section VIII of this Consent Decree.

31. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity: Provided, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Paragraphs 13.c., 16.f., and 18.e., during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Defendant of any deficiency; (2) with respect to Dispute Resolution under Section VIII, during the period, if any, beginning on the date of U.S. EPA's receipt of Defendant's statement of position and ending on the date that the Director issues a final decision regarding such dispute or, (3) with respect to judicial review, if any, under Paragraph 35, from the date that all briefs described in Paragraph 35 are received by the Court until the Court issues its final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

#### **VIII. DISPUTE RESOLUTION**

32. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. However, the procedures set forth in this Section shall not



apply to actions by the United States to enforce obligations of the Settling Defendants that have not been disputed in accordance with this Section.

33. The parties shall make reasonable, good faith efforts to resolve informally all disputes or differences of opinion regarding the meaning or implementation of this Consent Decree. If the parties cannot resolve any such dispute, the interpretation advanced by U.S. EPA shall be considered binding unless, within 15 days after the conclusion of the informal negotiation period, Defendant invokes the dispute resolution provisions of this Section.

34. Defendant shall invoke the formal dispute resolution procedures set forth in Paragraphs 34 thru 38 by serving on the United States a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis or opinion supporting that position and any supporting documentation relied upon by the Defendant. Within 15 days after receipt of Defendant's Statement of Position, U.S. EPA will serve on Defendant its Statement of Position, which shall include, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by U.S. EPA. Within 10 days after receipt of U.S. EPA's Statement of Position, Defendant may submit a Reply.

35. Following receipt of Defendant's Statement of Position and reply, if any, submitted pursuant to Paragraph 34, the Director of the Air Division, U.S. EPA Region 5, will issue a final decision resolving the dispute. The Air Division Director's decision shall be binding on the Defendant unless, within 15 days of receipt of such decision, the Defendant files with the Court and serves on the United States a motion for judicial review of the decision setting forth the matter in dispute, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly

implementation of the Consent Decree. Any response by the United States must be filed within 15 days of the date that Defendant's motion is due.

36. Judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

37. The invocation of formal dispute resolution procedures under this Section shall not extend, postpone or affect in any way any obligation of the Defendant under this Consent Decree, not directly in dispute, unless U.S. EPA or the Court agrees otherwise. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance with any applicable provision of this Consent Decree, except as set forth in Paragraph 31, but payment shall be stayed pending resolution of the dispute. In the event that Defendant does not prevail on the disputed issue, stipulated penalties shall be paid as provided in Paragraph 29.

38. In proceedings on any dispute governed by this Paragraph, Settling Defendants shall have the burden of demonstrating that the decision of the Air Division Director is arbitrary and capricious or otherwise not in accordance with law.

#### **IX. INSPECTIONS**

39. Until termination of this Consent Decree, U.S. EPA and their representatives, contractors, consultants, and attorneys shall have the authority to enter the Facility at all times upon proper presentation of credentials to the manager or managers of the Facility for the purposes of:

- a. monitoring the progress of activities required by this Consent Decree;
- b. verifying any data or information submitted to EPA in accordance with the terms of this Consent Decree;

c. conducting, pursuant to written protocols, any sampling or testing that U.S. EPA believes necessary to determine Defendant's compliance with this Consent Decree; or

d. otherwise assessing Defendant's compliance with this Consent Decree.

This provision in no way limits or affects any rights of entry and inspection held by either U.S. EPA pursuant to applicable federal or state laws or regulations.

#### **X. NOTICES AND SUBMISSIONS**

40. a. Whenever, under the terms of this Consent Decree, notice is required to be given or a document is required to be submitted by one party to another, such notices or submissions shall be directed to the individuals at the addresses specified in subparagraph "d" below, unless those individuals or their successors give notice of a change to all listed individuals, and their successors. Receipt of written notice as specified herein shall constitute complete satisfaction of any written notice requirement of this Consent Decree with respect to the United States, U.S. EPA and Defendant, respectively.

b. Defendant's notifications to or communications with U.S. EPA shall be deemed submitted on the date they are postmarked and sent by certified mail, return receipt requested. Such notifications and communications that are sent to U.S. EPA using sources other than the U.S. Postal Service will be deemed submitted on the day they are received by the United States.

c. All notifications and submissions required under this Consent Decree by Chemetco shall be signed by a responsible agent of Chemetco and shall include the following certification:

I certify under penalty of law that this document and all attachments were prepared

under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

d. Except as specified otherwise herein, all written notifications or communications between the parties relating to this Consent Decree shall be addressed as follows:

As to the U.S. Dept. of Justice:

[By U.S. Mail]

Chief, Environmental Enforcement Section  
U.S. Department of Justice  
Re: 90-5-2-1845  
P.O. Box 7611  
Washington, D.C. 20044

[By Overnight/Courier]

Chief, Environmental Enforcement Section  
Re: 90-5-2-1845  
U.S. Department of Justice  
1425 New York Ave., N.W.  
13th Floor  
Washington, D.C. 20005  
As to U.S. EPA:

Jeffery Trevino  
Assistant Regional Counsel  
U.S. Environmental Protection Agency  
Region 5  
77 West Jackson Boulevard (C-14J)  
Chicago, Illinois 60604-3590

Chief, Air Enforcement Assurance Branch  
U.S. Environmental Protection Agency  
Region 5  
77 West Jackson Boulevard (AE-17J)  
Chicago, Illinois 60604-3590

As to Defendant:

Chemetco, Inc.  
Director of Environmental Health and Safety  
Route 3 and Oldenburg Road  
Hartford, Illinois 62048

#### **XI. SCOPE OF SETTLEMENT**

41. a. Compliance with each and every requirement of this Consent Decree shall satisfy all civil liability of the Defendant for the United States' civil claims under the Clean Air Act specifically alleged in the Complaint through the date of lodging of this Consent Decree.

b. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's complete compliance with this Consent Decree will result in compliance with the provisions of the Act, its implementing regulations, any permit, or this Consent Decree. Notwithstanding U.S. EPA's review and approval of any plans formulated pursuant to this Consent Decree, Defendant shall remain solely responsible for compliance with the Act, its implementing regulations, and this Consent Decree.

#### **XII. EFFECTIVE DATE**

42. This Consent Decree shall be effective upon entry by this Court.

#### **XIII. TERMINATION**

43. This Consent Decree may be terminated by this Court upon the Court's granting a

motion by Defendant, after certification by Defendant to the United States, and the Court, that Defendant has achieved compliance with all provisions of this Consent Decree, has been in compliance with all applicable requirements of this Consent Decree, the Act and the regulations promulgated pursuant thereto for twelve (12) consecutive calendar quarters following entry of this Consent Decree and has paid all civil and stipulated penalties due. The United States shall advise the Court, within 30 days of the filing of Defendant's motion, as to the propriety of such motion to terminate.

#### **XIV. FORCE MAJEURE**

44. If any event occurs that causes or may cause the Defendant to violate any provision of this Consent Decree, Defendant shall notify the United States in writing within five (5) days of the date on which the Defendant knew or should have known of such event. The notice shall describe in detail the anticipated length of time the violation may persist, the precise cause or causes of the violation, the measures taken or to be taken by the Defendant to prevent or minimize the violation and the timetable by which those measures will be implemented. The Defendant shall adopt all reasonable measures to avoid or minimize any such violation. Defendant's failure to comply with the notice requirements of this Section shall render this Section void and of no effect as to the particular incident involved, and shall constitute a waiver of the Defendant's right to obtain an extension of time under this Section for its obligations based on such incident.

45. If the parties agree that the violation has been or will be caused by circumstances entirely beyond the control of the Defendant, or any entity controlled by or under the common control of the Defendant, including the Defendant's consultants and contractors, and the Defendant could not

have prevented such violation, the time for performance of such requirement may be extended for a period not to exceed the actual delay resulting from such circumstances, and stipulated penalties shall not be due for said delay. In the event the parties are unable to agree, the matter may be submitted by either party to the Court for resolution pursuant to Section VIII. If the violation is determined by the Court to have been caused entirely by circumstances beyond the control of the Defendant, or any entity controlled by or under the common control of the Defendant, the Defendant may be excused as to that violation for the period of time the violation continues due to such circumstances.

46. The Defendant shall bear the burden of proving that any delay was caused by circumstances entirely beyond the control of the Defendant or any entity controlled by or under the common control of the Defendant.

47. Unanticipated or increased costs or expenses associated with the implementation of actions called for by this Consent Decree or changed financial circumstances shall not, in any event, be a force majeure event and shall not serve as a basis for changes in this Consent Decree or extensions of time under this Consent Decree.

48. Compliance with any requirements of this Consent Decree by itself shall not constitute compliance with any other requirement. An extension of one compliance date based on a particular incident does not result in an extension of a subsequent compliance date or dates. The Defendant must make an individual showing of proof regarding each delayed incremental step or other requirement for which an extension is sought.

## **XV. CONTINUING JURISDICTION**

49. The Court shall retain jurisdiction after entry of this Consent Decree to modify or enforce its terms or to take any action necessary or appropriate for its construction or execution.

## **XVI. APPENDICES**

50. The following documents are appended to and incorporated in this Consent Decree: Appendix A is a Chart Identifying the Furnace Mode Combinations for Maximum Operations; Appendix B is the Stack Test Protocol; Appendix C is the Raw Materials Management System Protocol Requirements; and Appendix D is the CPMMS Protocol.

## **XVII. GENERAL PROVISIONS**

51. Compliance with the terms of this Consent Decree does not affect Defendant's obligation to comply with all applicable requirements of the Clean Air Act and regulations promulgated thereunder, and all other applicable requirements of Federal, State or local law.

52. This Consent Decree does not limit the ability of the United States to pursue its rights and remedies under any law or regulation or any Order of this Court.

53. Defendant acknowledges that it has been advised that it also may be subject to the applicable requirements of CAA Section 120, 42 U.S.C. Section 7420, providing for assessment of non-compliance penalties for violations occurring after the date of lodging of this Consent Decree.

54. Each party shall bear its own costs and attorney's fees in this action.

55. Except for technical or schedule changes, any modification of this Consent Decree must be in writing, signed by each of the parties, and approved by this Court before it becomes effective. Proposed modifications that do not result in a written agreement may be subject to dispute



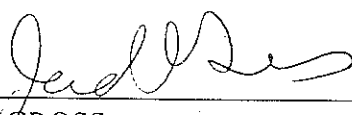
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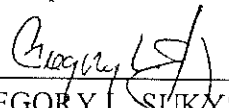
56. The public shall be given notice of this Consent Decree and an opportunity to comment on its provisions, pursuant to CAA Section 113(g), 42 U.S.C. § 7413(g), and 28 C.F.R. § 50.7. Following the close of the comment period, the United States may withdraw or modify its consent to the terms of this Consent Decree on the basis of comments received.

### **XVIII. SIGNATORIES**

57. The undersigned representative of Chemetco, Inc., and the Chief, Environmental Enforcement Section, Environment and Natural Resources Division, United States Department of Justice each certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree, to execute it and bind the party each person represents to this document.

FOR THE UNITED STATES OF AMERICA:

  
\_\_\_\_\_  
JOEL GROSS  
Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice

  
\_\_\_\_\_  
GREGORY L. SUKYS  
Environmental Enforcement Section  
U.S. Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044  
(202) 514-2068/616-6584 (FAX)

Consent Decree: United States of America v. Chemetco, Inc., Civ. No. 93-482-WDS (S.D. Ill.).

FOR THE UNITED STATES OF AMERICA:

W. CHARLES GRACE  
United States Attorney  
Southern District of Illinois

  
\_\_\_\_\_  
GERALD BURKE

Assistant U.S. Attorney  
Southern District of Illinois  
9 Executive Drive, Suite 300  
Fairview Heights, IL 62208  
(618) 628-3700/3720 (FAX)

Consent Decree: United States of America v. Chemetco, Inc., Civ. No. 93-482-WDS (S.D. Ill.).

FOR THE UNITED STATES OF AMERICA:

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FRANCIS X. LYONS

Regional Administrator

U.S. Environmental Protection Agency

Region 5

77 West Jackson Boulevard

Chicago, Illinois 60604-3590

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JEFFERY TREVINO

Associate Regional Counsel

U.S. Environmental Protection Agency

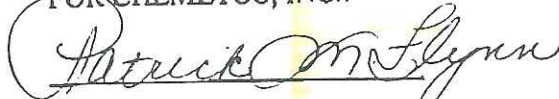
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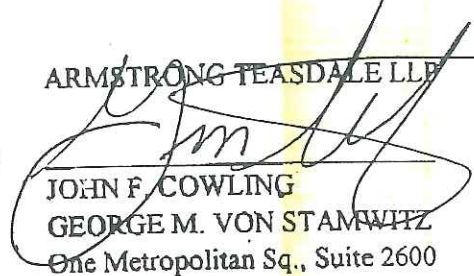
FOR CHEMETCO, INC.:

  
Patrick M. Flynn, Secretary

Chemetco, Inc.  
Route 3 and Oldenburg Road  
Hartford, IL 62048

ARMSTRONG TEASDALE LLP

By:

  
JOHN F. COWLING  
GEORGE M. VON STAMWITZ  
One Metropolitan Sq., Suite 2600  
St. Louis, Missouri 63102  
(314) 621-5070

Attorneys for Chemetco, Inc.

IT IS SO ORDERED.

Date:

4 January 2000  
~~1999~~

  
UNITED STATES DISTRICT COURT JUDGE

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA,

Plaintiff,

CIV. NO. 93-482-WDS

v.

Judge Stiehl

CHEMETCO, INC.,

Defendant.

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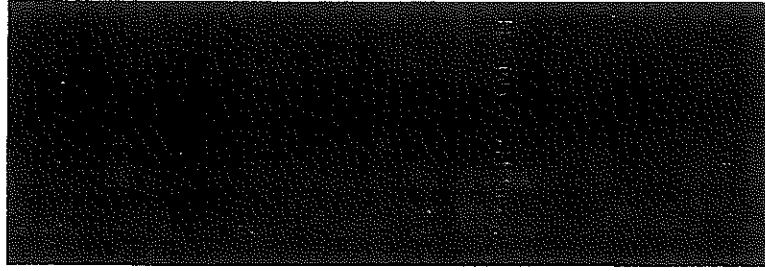
CONSENT DECREE

APPENDIX A

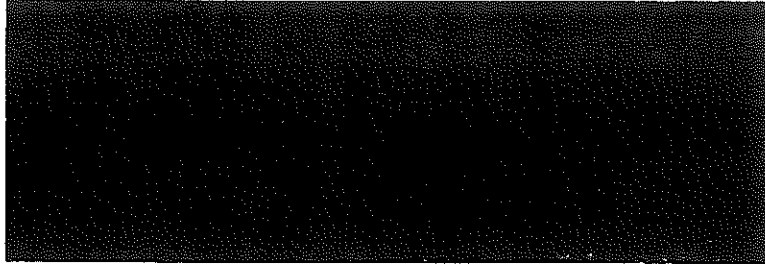
(CHART IDENTIFYING MODE COMBINATIONS FOR MAXIMUM OPERATIONS)

FURNACE OPERATIONS

#4 FURNACE



#2 FURNACE



#1 FURNACE

SMELT
SMELT
SMELT
SMELT
SMELT
SMELT

#3 FURNACE

INJECTION
INJECTION
INJECTION
INJECTION

8 HOURS

16 HOURS

24 HOURS

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA,

Plaintiff,

CIV. NO. 93-482-WDS

v.

Judge Stiehl

CHEMETCO, INC.,

Defendant.

---

CONSENT DECREE

APPENDIX B

(STACK TEST PROTOCOL)

## APPENDIX B

### STACK TEST PROTOCOLS

#### I. PURPOSE

U.S. EPA and Chemetco agree that Chemetco shall provide an agreed upon source of credible evidence for demonstrating "continuous compliance" with particulate emission limits for Illinois Administrative Code Title 35, § 212.321 and § 212.322.

In accordance with this Consent Decree, Chemetco shall install and operate a continuous particulate mass monitoring system ("CPMMS"). The CPMMS certification requirements as outlined under Appendix D - IV require that stack testing be performed to establish a calibration curve for each Mass Monitor.

The three emissions testing activities outlined in the consent decree are the following:

1. CPMMS Calibration Testing Activity

Chemetco will establish the CPMMS calibration curves through regression analysis of stack test data and Mass Monitor data for each of the four Mass Monitors.

2. Baseline Stack Testing Activity

Baseline stack emissions testing will be conducted to demonstrate that each combination of Chemetco's secondary copper smelting furnaces, as a Process Emission Unit, is in compliance with the particulate emission limit in pounds per hour when it is operated in the mode scenario associated with maximum emissions.

3. Optional Stack Testing Activity

The Consent Decree, under paragraph 19, provisions Chemetco to conduct "optional stack testing activity" under the provision of unreliable CPMMS data. Chemetco may attempt to demonstrate through stack testing that fewer than all of the elements of the facility's pollution control system are sufficient to meet the applicable standards for one or more furnace modes.

Appendix B provides stack test protocols for the last two of the three above mentioned activities which are to be certified by a third party stack testing firm. The first protocol is the "Baseline Stack Testing Protocol" and the second protocol is the "Optional Stack Testing" protocol.



## **II. BASELINE STACK TESTING PROTOCOL**

Baseline emissions testing shall be performed in accordance with Section IV. (Methods and Sampling Procedures). The baseline stack testing shall be performed for the maximum mode scenario which is presented in Appendix A. The testing shall be conducted to determine the actual controlled emissions rate of the particulate matter in pounds per hour for each of the two process emission units. The first foundry process emission unit is the combination of Furnace No. 2 & 4. The second process emission unit is the combination of Furnace No. 1 & 3. The stack testing locations shall be in the furnace stacks which are identified by their furnace number. Section IV. C. describes the simultaneous sampling of the two stacks of each process unit and the sampling locations. The minimum testing is presented in Table 1. The allowable particulate matter emission rate in pounds per hour shall be calculated by actual process weight rate of the batch tested.

Chemetco shall be responsible for the monitoring and recording process operating parameters during the emissions testing as described in Section IV. D. Chemetco shall establish baseline operating ranges of pressure drop for the control device systems of each furnace or process unit and of scrubant nozzle pressure for all new active air pollution control equipment. The baseline operating ranges for the control devices shall be recorded and established.

The CPMMS for each stack consists of a Mass Monitor which measures particulate matter concentration and a Flow Monitor which measures the volumetric air flow in the stack. The testing will establish the acceptable range for the CPMMS. The Reference Method ("RM") testing shall be conducted in such a way, that the results are representative of the source emissions and can be correlated to the CPMMS data in pounds per hour.

In summary, a minimum of twelve (12) one-hour runs of Method 5 particulate matter sampling shall be conducted over three (3) batch cycles on the four (4) furnace stacks to determine the compliance with allowable emissions limits; associated operating baseline parameters; and the acceptable range of each CPMMS system. The Method 1, 3, 4, and 5 sampling procedures and equipment are presented later in detail in Section IV.

## **III. OPTIONAL STACK TESTING PROTOCOL**

Paragraph 19 of this Consent Decree, contains a provision for the use of emission limits achieved during optional stack testing instead of CPMMS data. The provision shall apply to the performance

of stack tests if either party concludes that the CPMMS or the data derived there from is unreliable, pursuant to the terms of the Consent Decree. The testing shall be performed in accordance with Section IV. and establish the particulate matter emission rates in pounds per hour to compare with actual batch process weight rates for each process unit. The same parameters shall be tested and recorded as presented in Section II. and IV.

#### **IV. METHODS AND SAMPLING PROCEDURES**

##### **A. EMISSIONS TEST METHODS**

The third party testing firm shall conduct particulate matter (PM) emissions testing at the four furnace stack locations. Table 1 presents a sampling and analytical matrix for this test program.

The testing firm shall conduct the testing program in accordance with the recent EPA reference test methodology as outlined in Title 40, Part 60, Appendix A of The Code of Federal Regulations (40 CFR 60). Specifically:

- |      |              |   |
|------|--------------|---|
| i)   | EPA Method 1 | Determination of traverse points for velocity and PM sampling.  |
| ii)  | EPA Method 2 | Stack gas velocity determination with calibrated Type "S" pitot tubes and calibrated Type "K" thermocouples.                  |
| iii) | EPA Method 3 | Dry gas molecular weight determination through analysis of CO, O <sub>2</sub> , and CO <sub>2</sub> .                         |
| iv)  | EPA Method 4 | Volumetric flow rate and moisture content determination with calibrated dry gas meters and calibrated Type "K" thermocouples. |
| v)   | EPA Method 5 | Isokinetic determination of particulate matter (PM) with a complete borosilicate glass (and/or quartz) sample train.          |

##### **B. PARTICULATE MATTER SAMPLING EQUIPMENT AND PROCEDURES**

The sampling equipment will consist of the following:

###### **1. Pitot Assembly**

- a. Glass with a sharp, tapered leading edge.
- b. Probe — Stainless steel sheath with a 5/8" OD glass liner wrapped with nichrome wire rheostat controlled and capable of maintaining a temperature of 248°F ±25°F.

<p align="center"><b>Table 1</b>  <b>Sampling and Analytical Matrix</b>  <b>Typical for Four Furnaces</b>  <b>Chemetco, Inc.</b></p>					
<b>Sampling Location</b>	<b>Parameter</b>	<b>Sampling Method</b>	<b>Analytical Method</b>	<b>Duration of Test Runs</b>	<b>Total Number of Test Runs</b>
Location (Exhaust stack)	Sampling Point Determination	Method 1	Calculated	---	
	Velocity & Volumetric Flow Rate	Method 2	Type S - Pitot Tube	1 Hr.	3
	Molecular Weight	Method 3	Orsat	1 Hr.	3
	Moisture	Method 4	Volumetrically	1 Hr.	3
	Particulate Matter	Method 5	Particulate-Gravimetrically	1 Hr.	3

Simultaneously sampling for each process emission unit: Furnace No. 2 & 4; Furnace No. 1 & 3

- c. Pitot — Type "S" constructed and attached to probe according to specifications outlined in the "Code of Federal Regulations, Chapter I, Title 40, Part 60, Appendix A, Method 2."
  - d. Orsat probe — Stainless steel ¼" tubing attached to pitot tube in an interference-free arrangement.
  - e. Thermocouple — Type "K" attached to the pitot tube such that the tip has no contact with the metal and does not interfere with the pitot tube face openings.
2. Filter Holder — Borosilicate glass with a glass fritted filter support and a silicone rubber sealing gasket.
  3. Filter Heating Assembly — Controlled heating element in aluminum module attached to end of probe; capable of maintaining 248°F ±25°F.
  4. Impingers — Four glass impingers connected in series with glass fittings and placed in an ice bath. The first, third, and fourth impingers will be of the modified Greenburg-Smith design. The second impinger will be of the Greenburg-Smith design with a standard tip. Final gas exit temperature will be measured to within ±5°F with a thermometer immersed in the gas stream.
  5. Control Box — Module containing the vacuum gauge, leak-free pump, thermometer capable of measuring temperature to within ±5°F, dry gas meter with a minimum of 2% accuracy, valves and related equipment as required to maintain an isokinetic sampling rate and to determine sample volume.
  6. Nomograph — To determine isokinetic sampling rate.

A schematic of the sampling train is shown in Figure 2.

Prior to leaving the laboratory, glass fiber filters are numbered for identification purposes, heated for 2 hours at 220°F, desiccated for 2 hours, and preweighed to the nearest 0.1 mg.

Upon arrival at the sampling site, the control box will be leak-checked from the pump to the orifice at 5" to 7" of water.

Figure 2

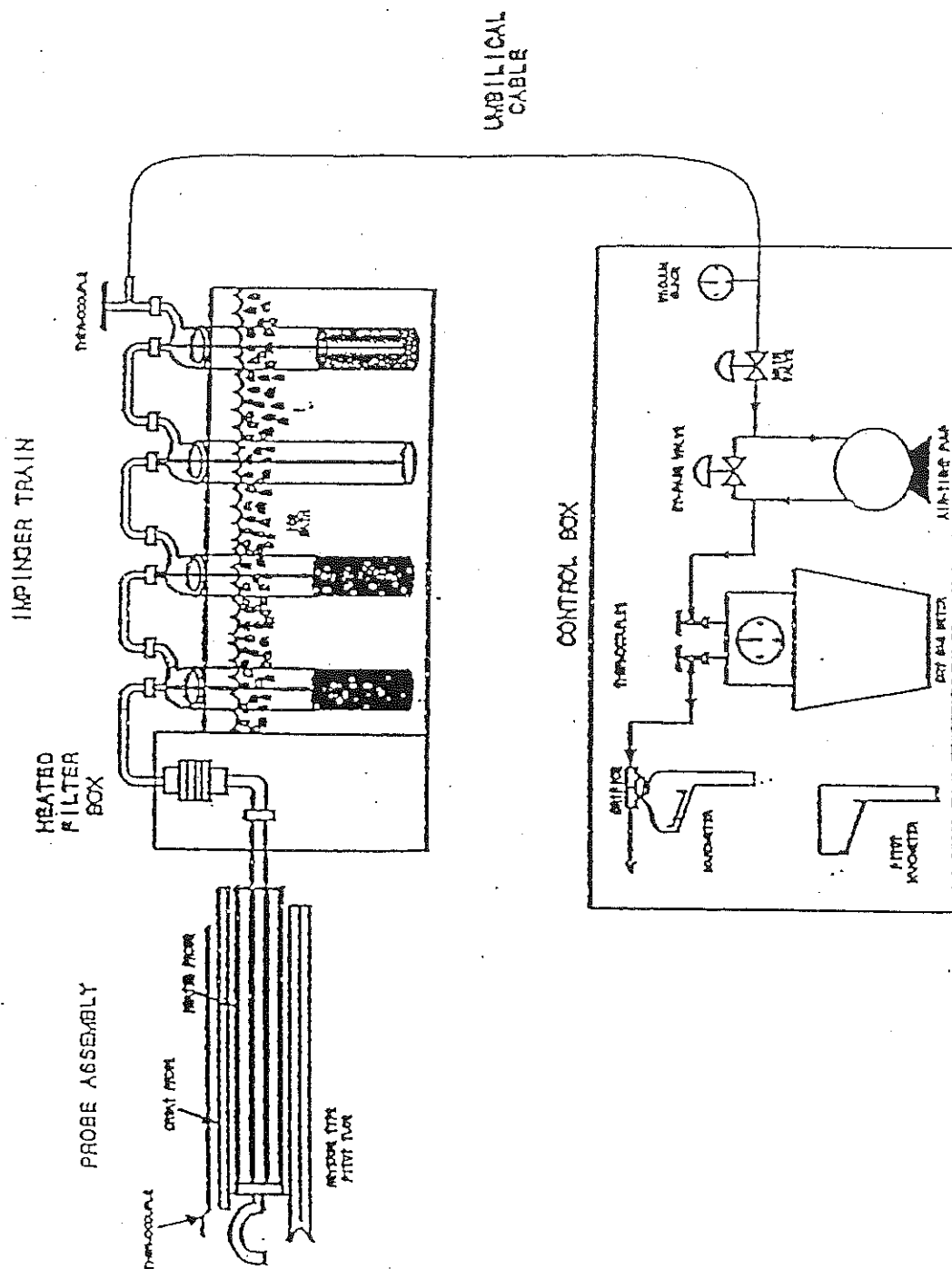


FIGURE 2  
Particulate and Lead Sampling Train  
EPA Method 12

The sampling train will be prepared in the following manner: 100 ml of distilled water added to each of the first two impingers. The third impinger will be left empty and the fourth impinger will contain approximately 250 grams of silica gel.

After assembling the train with the pitot tube, as shown on the schematic, the system will be leak-checked by plugging the inlet to the probe nozzle and pulling a 15" mercury vacuum. A leakage rate not to exceed 0.02 cfm is considered acceptable. The pitot tube system will also be leak-checked at 2" to 3" of water, and any leaks found will be corrected.

The probe nozzle size and moisture content will be derived from a preliminary velocity and temperature traverse measurement. Sampling points within the stack will be selected in accordance with EPA Method 1 (40 CFR 60, Appendix A). The sampling probe will be attached and the heater adjusted to provide a gas temperature of approximately  $248^{\circ}\text{F} \pm 25^{\circ}\text{F}$ .

The filter heating system will be turned on, and ice placed around the impingers. After a suitable warmup period, the nozzle will be placed at the first traverse point with the flow adjusted to isokinetic conditions. Using calculated sampling points and sampling times, the probe is repositioned to the next traverse point, and isokinetic sampling is reestablished. This will be accomplished for each point along the traverse until the run is completed. Readings are taken at each traverse point and at the calculated time interval. At the conclusion of each run, the pump will be turned off and the final readings recorded. A final leak check of the sampling system will be performed, as previously described at the highest vacuum encountered during the test run. A leak check of the pitot system will also be repeated.

### C. SAMPLING LOCATIONS

The emission samples for particulate matter (PM) shall be collected simultaneously from two different locations. The two locations shall be the exhaust stacks from each process emission unit. The emission samples at this stack location shall be collected from the existing 4 foot 10 inch circular duct equipped with two, 4 inch I.D. sampling ports. The upstream and downstream diameters are configured such that the maximum number of sample points shall be required. Exact measurements shall be conducted in the field the day of the testing, but the testing firm expects to use twelve sampling points on each traverse, for a total of at least 24 sampling points. See Figures 1-A and 1-B for the process layout.



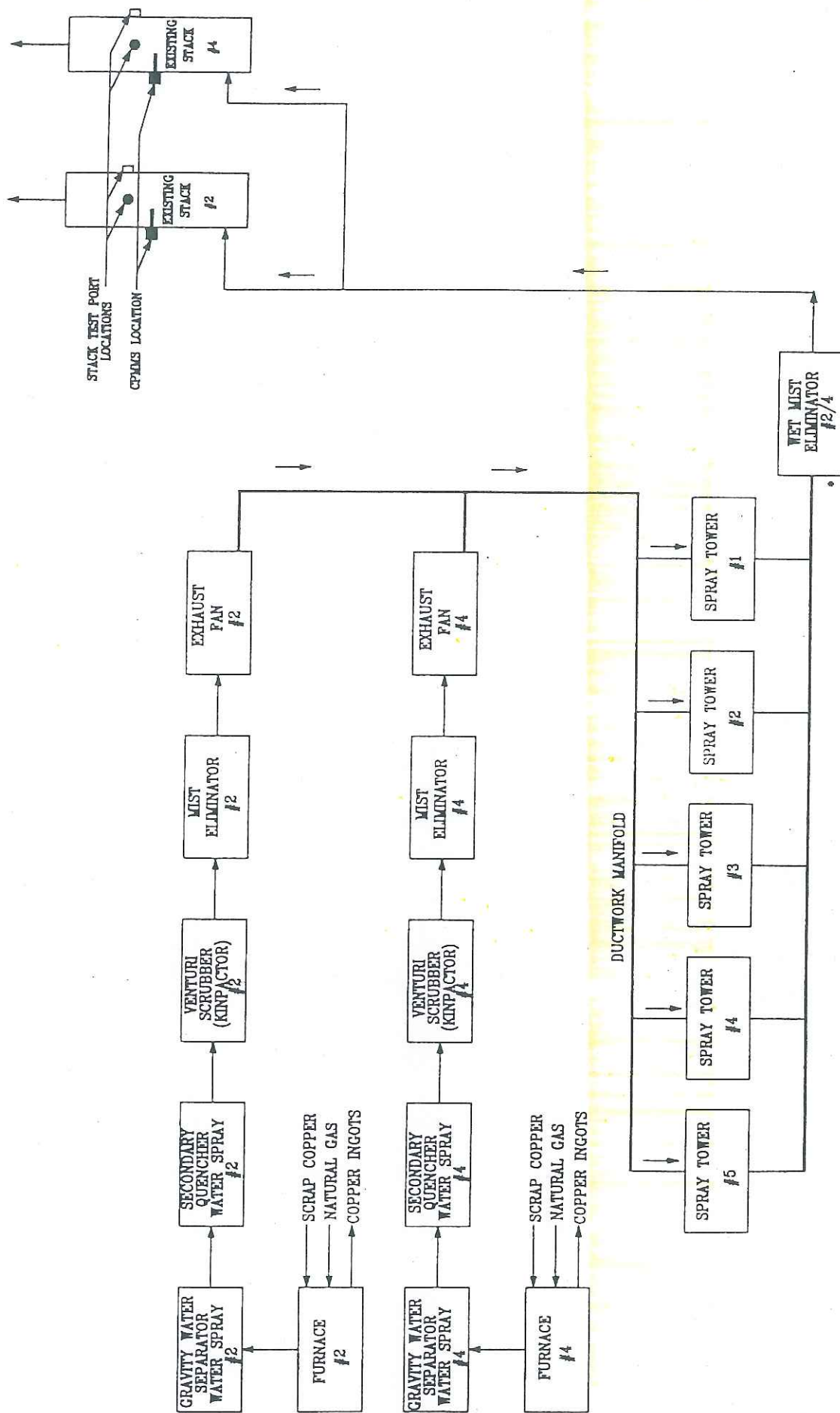


FIGURE 1-A

\* INCLUDES SPRAY VANE SECTION, MIST ELIMINATOR SECTION, AND DRY FILTER SECTION

CHEMETCO

CPMMS CERTIFICATION

PROCESS EMISSION UNIT 2/4

DATE: 10-15-99

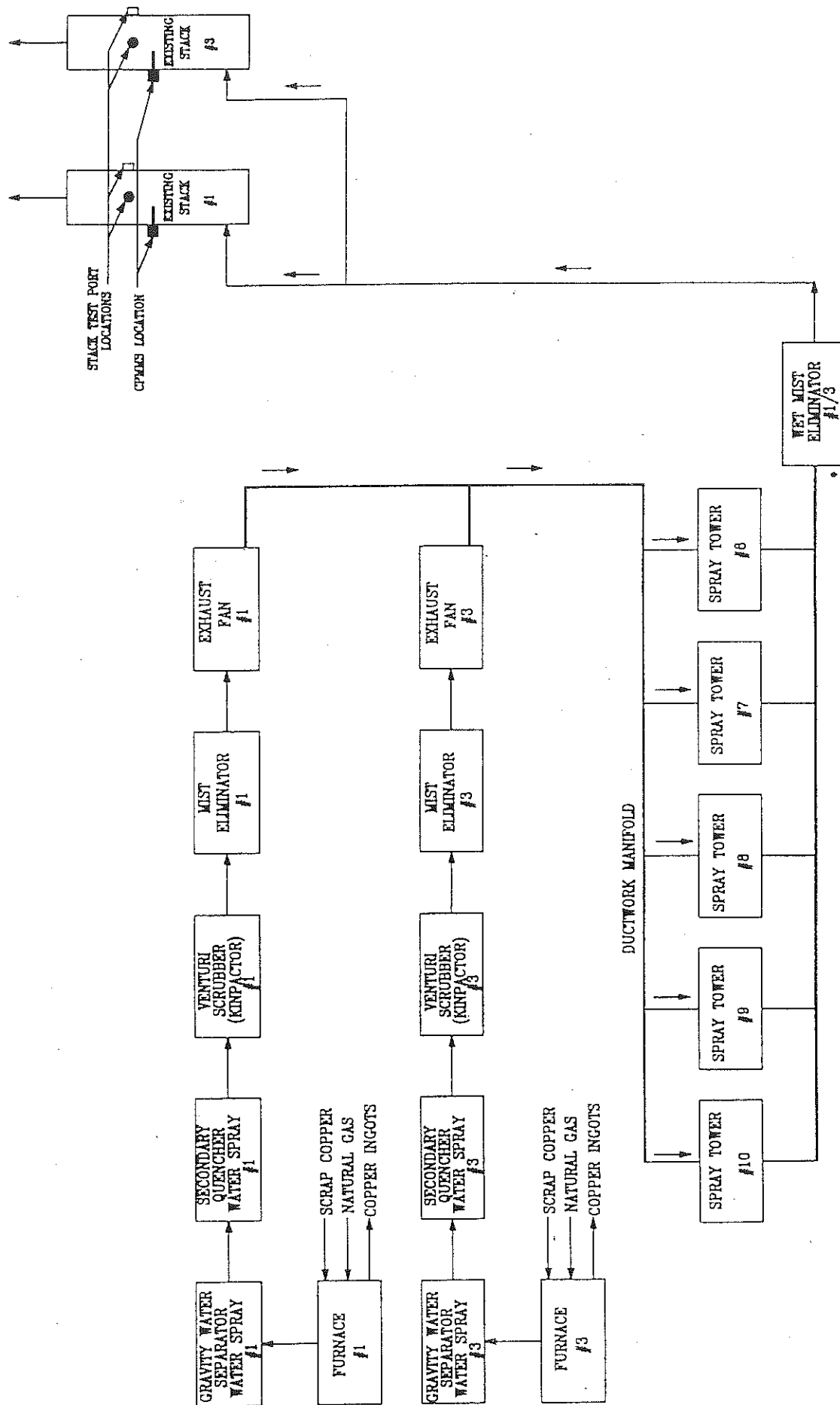


FIGURE 1-B

\* INCLUDES SPRAY VANE SECTION, MIST ELIMINATOR SECTION, AND DRY FILTER SECTION

CHEMETCO

CPMMS CERTIFICATION

PROCESS EMISSION UNIT 1/3

DATE: 10-15-99



#### **D. OPERATION PARAMETERS TO BE MONITORED**

Chemetco personnel shall be responsible for monitoring and recording process operating parameters during the emissions testing program. These shall include at a minimum the following:

- heat logs for the furnaces being rested,
- pressure drop across the Venturi scrubbers, and
- water flow rate to each water spray tower.

Chemetco personnel shall observe readings from the appropriate instrumentation and document the readings at a minimum of every 15 minutes during the test runs. The process operations data shall be compiled and averaged for each of the 1-hour test runs.

Chemetco shall develop recipes for furnace changes that are representative of worst case normal operations for generation of process particulate emissions. Each type of material in each charge shall be sampled for analysis or graded to determine lead and zinc percentages by weight. Sampling and analysis of the charge materials shall be conducted in accordance with Chemetco's Standard Operating Procedures (SOP) Number 1 or 2.

Chemetco shall provide written notice to IEPA upon its decision on the charge recipes. The recipes shall be kept in the Maintenance Engineering Department under the supervision of Mr. Kim Fock.

#### **E. SAMPLE RECOVERY**

The tester will rotate and agitate each impinger, so that the impinger contents serve as a rinse solution, and transfer the contents to a graduated cylinder to measure the volume. After the determination of the volume, the solution will be transferred to the "postfilter" container.

The probe nozzle, and all sample-exposed surfaces are washed with reagent-grade acetone and put into a clean sample bottle marked "prefilter." A brush will be used to loosen any adhering particulate matter, and subsequent washings will be put into the "prefilter" container. Any filter material that adhered to the filter support surfaces will be carefully removed and added to the filter container. The silica gel will be removed from the fourth impinger and transferred to its original container.

## F. ANALYTICAL PROCEDURES

PM will be determined by the gravimetric analysis of the probe/front half wash (acetone solution) and glass fiber filters in accordance Method 5. The filter and any loose particulate matter will be transferred from the filter container to a clean, tared glass weighing dish. The filter will be placed in a desiccator for 24 hours and weighed to a constant weight. The original weight of the filter will be deducted, and the weight gain recorded to the nearest 0.1 mg.

The "prefilter" wash and blank acetone solutions will be transferred to individual clean, tared beakers, then evaporated to dryness and desiccated to a constant weight. The weight gain of the "prefilter" is adjusted for the blank and recorded to the nearest 0.1 mg. The silica gel is weighed, and the weight gain is recorded to the nearest 0.1 gram.

All samples and blanks will be analyzed by the recommended procedures stipulated for each EPA Reference Method. Field blanks and QA/QC practices will be strictly followed as outlined in the EPA analytical procedures. Chain of Custody worksheets will accompany all samples from collection at the facility, throughout transportation, and during the analysis period. The testing firm has requested 7 day turnaround of laboratory sample analysis.

## G. OXYGEN (O<sub>2</sub>) AND CARBON DIOXIDE (CO<sub>2</sub>) SAMPLING

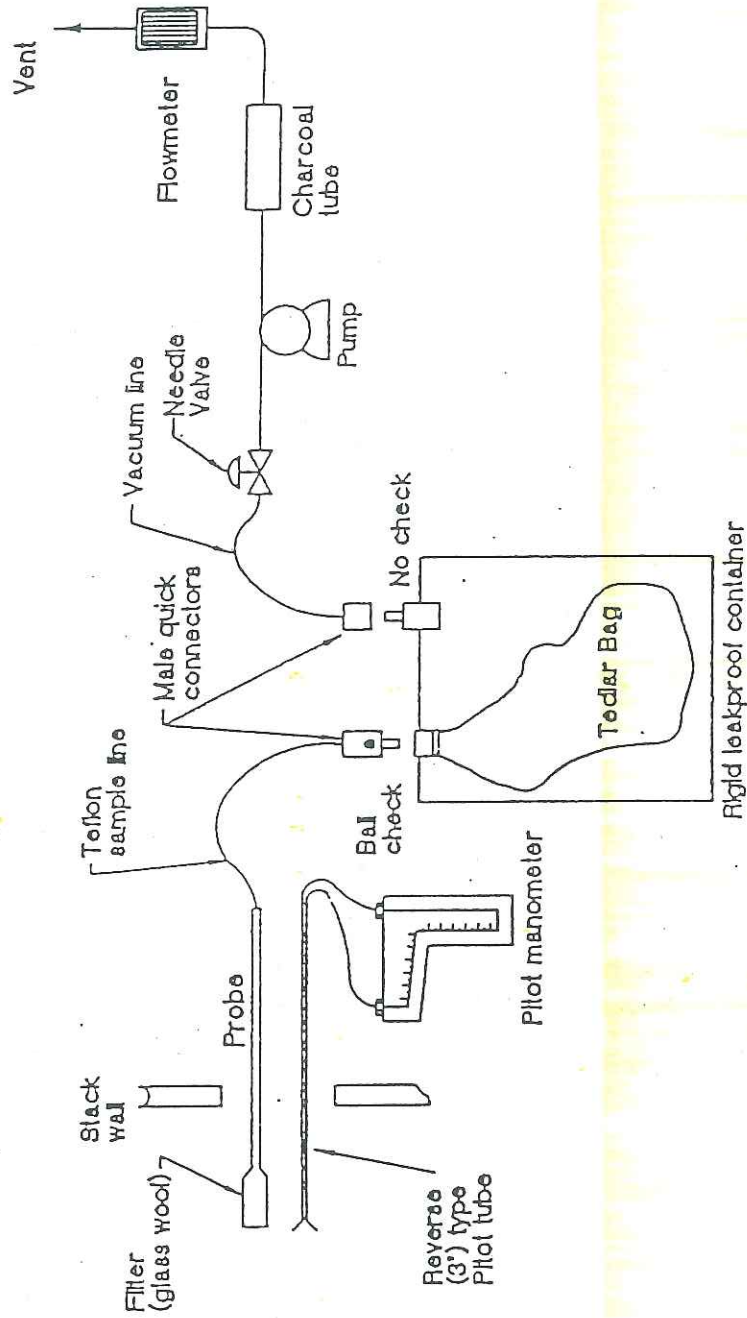
As required by EPA Method 3 (40 CFR 60, Appendix A), oxygen and carbon dioxide samples will be collected by an integrated bag system. The collected sample is then analyzed using a Fyrite gas analyzer. Oxygen and carbon dioxide concentrations will be determined in percent of stack gas and stack gas molecular weight is then calculated.

A schematic of the integrated bag sampling train is presented in Figure 3.

## H. SAMPLING PROCEDURES

The sampling procedure consists of the following leak check and sampling techniques. Prior to sampling, the bag is leak-checked to 2 to 4 in. of water. The inlet to the condenser is plugged, and a vacuum of 10 in. of Hg is created. The outlet of the pump is then plugged and the pump turned off. The vacuum is observed for 30 seconds to determine any leakage. The vacuum must hold steady for at least 30 seconds for the leak test to be acceptable. The sample line is then purged with stack gas and the bag is connected. Sampling is conducted at an appropriate constant rate at the same traverse points and for the same length of time as the other testing parameters. At the conclusion of the run, the pump is turned off and the bag sealed.

Figure 3



SOURCE: ENVIRONMENT REPORTER

FIGURE 3  
Integrated Bag Sampling Train

## I. ANALYTICAL PROCEDURES

The percentage of effluent gas which was O<sub>2</sub> and CO<sub>2</sub> are measured directly. Nitrogen and CO content are determined by subtracting the sum of CO<sub>2</sub> and O<sub>2</sub> percent from 100 percent.

The dry molecular weight is calculated using the following equation:

$$M_d = 0.440 \times \% \text{ CO}_2 + 0.320 \times \% \text{ O}_2 + 0.280 \times (\% \text{ N}_2 + \% \text{ CO})$$

## J. QUALITY ASSURANCE/QUALITY CONTROL

Strict Quality Assurance/Quality Control (QA/QC) measures will be observed for all sampling and analysis performed for the Chemetco test program. The QA/QC program is designed to provide the highest quality data in terms of the accuracy and precision of the measurements as well as the representativeness and comparability of the results. All procedures and quality control guidelines specified in the appropriate methods and in the EPA Quality Assurance Handbook for Air Pollution Measurement Systems - Volume II will be strictly followed during the test program, in addition to the testing firm's more stringent internal quality control standards. All sampling will be conducted in a manner so that each test run of each method is conducted as simultaneously as possible with other methods.

### 1. Manual Methods QA/QC

The QA/QC program for this test series includes all of the QA/QC guidelines given by EPA in the attached test methods and procedures in the testing firm's more stringent internal QA/QC standards. Primary components of the QA/QC program are listed below:

- Equipment Calibrations - including meter boxes, thermocouples, pitot tubes and analytical balance.
- Equipment Leak Checks - including pre- and post-test sample train leak checks, meter and pump leak checks, pitot leak checks and ORSAT system leak checks.
- Careful monitoring and documentation of sample train critical parameters including temperatures and meter pressure.
- Preliminary measurements to aid in calculating the sampling K-factor used to determine isokinetic sampling rate.

- Maintaining an isokinetic sampling rate so that the velocity through the sampling nozzle matches the surrounding flue gas stream velocity to within +/- 10%.
- Field and Laboratory Blanks will be conducted for each set of samples.
- Careful chain of Custody procedures will be observed for all samples and all samples will be refrigerated after collection and recovery and during shipping and storage in the laboratory prior to analysis.
- All samples will be analyzed within the required hold times of each individual method.

All sampling trains will be leak checked prior to and after each sampling run. If the leak rates exceed the maximum acceptable leak rate of 0.02 cubic feet per minute, corrective action will be taken. Sample train leak checks will be performed at a vacuum of at least 5" Hg greater than the highest observed vacuum observed during sampling. All sample trains will meet the +/- 10% criterion for isokinetic sampling or corrective action will be taken. All particulate matter samples will be desiccated and replicate analyses will be performed until agreement of 0.5 mg between weighing's which will be six hours apart. Blanks and other quality control indicators as specified for each technique will be collected and analyzed as appropriate.

## 2. Chain of Custody

Chain of Custody worksheets are prepared daily at the test location detailing the person(s) immediately responsible for the recovery of every sample. The Chain-of-Custody forms are prepared with detailed identifications of each sample, the analysis requirements, and the persons immediately responsible for the recovery. Signatures of every person in contact with the samples from the test location to the laboratory are recorded. Test date, sample identification, and the laboratory performing the analyses are identified on the Chain of Custody worksheet.



## K. PROJECT CONTACTS

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Columbia, MO 65203-0045

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Manager, Special Engineering Projects

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Fax: 573-445-0137



IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA,

Plaintiff,

CIV. NO. 93-482-WDS

v.

Judge Stiehl

CHEMETCO, INC.,

Defendant.

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CONSENT DECREE

APPENDIX C

(RAW MATERIALS MANAGEMENT SYSTEM PROTOCOL REQUIREMENTS)



### Raw Materials Management System Protocol Requirements

Chemetco shall utilize the raw materials management system and process analyses described in this Protocol.

a. Within 180 days after entry of this Consent Decree, Chemetco shall develop and utilize and maintain a computer-based Raw Material Data Base program to calculate and record the Weighted Average of zinc and lead percentages for each recipe for each Furnace Charge.

(1) Chemetco shall generate its Raw Material Data Base each day and retain it at the Facility until termination of this Consent Decree;

(2) Chemetco shall make the Raw Material Data Base available to IEPA and U.S. EPA upon request for inspection and photocopying.

b. Chemetco shall employ sampling and analytical standard operating procedures conducted in accordance with Chemetco's Standard Operating Procedure No. 1 or 2, where applicable, as set forth in Appendix C, whenever Chemetco handles, accepts, or stores any scrap material and assigns an assay based on sampling and analyses, historical data, or sight-grading, to any scrap material it accepts for use in the Facility's Furnaces.

c. Chemetco shall maintain a scrap material history file: after Chemetco assigns any scrap material an assay, that assignment shall become a part of the scrap material history file and added to the Raw Material Data Base.

d. Chemetco shall transfer to a storage area assigned a specific location code any scrap material after it is accepted for processing. Chemetco shall include this code in the Raw Material Data Base.

e. Chemetco shall maintain any scrap material in a separate stockpile area and assign such separate stockpile area a separate location code in Chemetco's Raw Material Data Base if Chemetco accepts such scrap material for processing and the zinc or lead percentage in such scrap material exceeds the Weighted Average determined for that type of material during the stack tests.

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA,

Plaintiff,

CIV. NO. 93-482-WDS

v.

Judge Stiehl

CHEMETCO, INC.,

Defendant.

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CONSENT DECREE

APPENDIX D

(CPMMS PROTOCOL)

**CONTINUOUS PARTICULATE MASS MONITOR SYSTEM PROTOCOL  
(FOR CONSENT DECREE IN U.S. v. CHEMETCO, INC., NO. 93-482-WDS, S.D. ILL)**

**I. Purpose**

U.S. EPA and Chemetco agree that the Chemetco shall procure, install, calibrate, operate, and maintain a Continuous Particulate Mass Monitoring System ("CPMMS") on each of the emission points (stacks) serving the Furnaces and their air pollution control devices to:

- A. Provide Chemetco with near real time, particulate mass emissions rate data for improving operation and maintenance of the Furnaces and the associated air pollution control devices and thereby minimizing particulate and lead emissions at all times;
- B. Provide U.S. EPA and Chemetco with continuous particulate mass emissions information in the units of the applicable Illinois emissions standard and thereby minimize their reliance upon surrogate measurements, like opacity and pressure drop across control devices, for monitoring compliance with the Furnaces' particulate emissions rate;
- C. Minimize the number of stack tests that would be required, by the Consent Decree to which this Protocol is appended ("Consent Decree"), for determining 'continuous compliance' with the Furnaces' particulate emissions rate and for potentially eliminating the need for stack tests after the certification of the CPMMSs and through the life of the Consent Decree;
- D. Provide an agreed source of credible evidence for demonstrating 'continuous compliance' with the particulate emission limits;
- E. Demonstrate the utility of a CPMMS for monitoring a secondary copper smelter's furnace emissions.

**II. Monitoring Equipment**

- A. The CPMMS shall be comprised of a continuous particulate mass monitor ("Mass Monitor") measuring particulate matter concentration on an hourly basis and a monitoring device or system ("Flow Monitor") for measuring the exhaust gas flow on an hourly basis. Chemetco shall provide a means of computing and recording the values of the particulate emission rate in pounds per hour from the Mass Monitor hourly mass concentration values and the Flow Monitor hourly values. Chemetco shall also provide a means of computing and recording the allowable particulate emission rate on an hourly basis for each "Process Emission Unit" using the equations in Illinois Administrative Code Title 35, §212.321 and §212.322 and information on the Furnace charges from the Raw Materials Management System.

### III. Process Emission Units

- A. CPMMSs shall be installed to monitor continuously the particulate mass emissions rate from the Process Emission Units - Furnaces No. 1 and 3 discharging through Stacks No. 1 and 3, and Furnaces No. 2 and 4 discharging through Stacks No. 2 and 4.
- B. Furnaces No. 1 and 3, as a Process Emission Unit, shall be subject to a process weight rate emission limitation pursuant to Illinois Administrative Code Title 35, §212.322. For each hour of operation of the Process Emission Unit, Chemetco shall compute and record the allowable particulate emission limit and shall combine the CPMMSs' measured emissions from each stack to provide, in pounds per hour, the particulate matter emission rate.
- C. Furnaces No. 2 and 4, as a Process Emission Unit, shall be subject to a process weight rate emission limitation pursuant to Illinois Administrative Code Title 35, §212.321. For each hour of operation of the Process Emission Unit, Chemetco shall compute and record the allowable particulate emission limit and shall combine the CPMMSs' measured emissions from each stack to provide, in pounds per hour, the particulate matter emission rate.

### IV. Installation and Certification Schedule

- A. Within 60 days following Chemetco's receipt of U.S. EPA's approval of the Continuous Particulate Mass Monitoring Plan required by Paragraph 18 of the Consent Decree, Chemetco shall procure and install a CPPMS on each stack serving Furnaces No. 1 & 3 and on each stack serving Furnaces No. 2 & 4. Chemetco shall install the Mass Monitors pursuant to the installation requirements found in Section 5 of ISO 10155:1995(E); (with the exception that the particulate matter reference measurement method to be used should be Reference Method 5, Appendix A, 40 C.F.R. Part 60 instead of ISO 9096) and shall install the Flow Monitors pursuant to the installation requirements found in Section 1.2.1 of Appendix A, 40 C.F.R. Part 75. If Chemetco chooses to install CPMMSs which require heated bypass duct systems for proper sampling and processing of wet, aerosol-laden exhaust gases, the installation and certification schedule shall be extended an additional 60 days to provide for the design and engineering of those bypass systems.
- B. No later than 30 days after Chemetco installs and begins to operate its CPMMS, Chemetco shall conduct and complete tests to demonstrate that the "Mass Monitor" conforms to the performance characteristics and test specifications found in the international standard for the automated monitoring of the mass concentration of particulate matter in stationary source gas streams, ISO 10155:1995(E);
- C. No later than 30 days after Chemetco installs and begins to operate its CPMMS, Chemetco shall conduct and complete tests to demonstrate that the installed "Flow Monitor" conforms to the performance characteristics and test specifications found in the 40 C.F.R. Part 75 Appendix A, Sections 2.1.4, 2.2.2, 6.3.2, 6.5.2, 6.5.8, 6.5.9, 6.5.10, 7.2.2 and 7.3



- D. From the date of installation and operation of the CPMMS to no later than 210 days after entry of the Consent Decree, Chemetco's combined emissions from Furnaces 1 & 3 discharged through stacks 1 & 3 shall comply with an interim particulate matter emission rate of 32.00 pounds per hour and Chemetco's combined emissions from Furnaces 2 & 4 discharged through stacks 2 & 4 shall comply with an interim particulate matter emission rate of 13.00 pounds per hour.

#### V. Certification

- A. Chemetco shall test each CPMMS to demonstrate conformance with the certification requirements;
- B. Chemetco shall test the Mass Monitor in each CPMMS to demonstrate conformance with the Response Time, Zero Drift, Span, Span Drift and Calibration specifications found in be Section 6 of ISO 10155:1995(E); using the test procedures in Section 7;
- C. During the Mass Monitor Calibration test, Chemetco shall acquire at least nine sets of particulate concentration measurements for each CPMMS (each set a minimum of one hour duration). The Chemetco shall arrange for acquisition of at least three sets of such data reflecting a combination of Furnace Modes within a Process Emission Unit that are associated with low emission rates, at least three sets of data reflecting a combination of Furnace Modes within a Process Emission Unit associated with intermediate emission rates, and at least three sets of data reflecting a combination of Furnace Modes within a Process Emission Unit associated with high emission rates.
- D. Chemetco shall test the Flow Monitor in each CPMMS to demonstrate conformance with the Calibration Error specification - less than or equal to 3.0 percent of span - using the test procedures in Sections 6.3.2 and 7.2.2 of 40 C.F.R. Part 75 Appendix A; the span of the Flow Monitor shall be 125 percent of either the maximum potential velocity or maximum potential flow (scfh -wet basis) in the monitored stack;
- E. Chemetco shall test the Flow Monitor in each CPMMS to demonstrate conformance with the Relative Accuracy specification - 15 percent - using the test procedures in Sections 6.5.2, 6.5.4, 6.5.8, 6.5.9 and 6.5.10.

#### VI. Quality Control

- A. Chemetco shall perform on the Flow Monitor a daily calibration error test and an interference check ( 40 C.F.R. Part 75, Appendix A, Sections 2.2.2.1 and 2.2.2.2, respectively). The Chemetco shall perform on the Mass Monitor a daily Zero and Span Drift Check (ISO 10155:1995(E) Section 7.3.3). Corrective actions or adjustments are required on the monitors if calibration error or drift values or accumulated automatic adjustments exceed 6 percent of the

span or interference is detected.

## VII. Record Keeping & Reporting

- A. Within 30 days following completion of certification tests required by Paragraph 18.c. of the Consent Decree, Chemetco shall report to U.S. EPA, in accord with provisions in the Consent Decree, test results and supporting data on the certification of each of the continuous particulate mass monitoring systems.
- B. Chemetco shall maintain in an electronic database records of its process weight (furnace charge) in tons per hour, the Process Emission Unit's allowable emission rate in pounds per hour, each Mass Monitor's hourly values, each Flow Monitor's hourly value, each CPMMS emission rate in pounds per hour, the Process Emission Unit's emission rate in pounds per hour, and the percentage of lead in the charge. Those records should be available for review and inspection by U.S. EPA and IEPA.
- C. Chemetco shall compute and store the allowable emission rates for Furnaces No. 1 & 3 using the equation  $E = C + A(P)^B$ .
- $E$  = allowable emission rate in pounds per hour.  
 $C$  = 0 for process weight rates up to 30 tons per hour or -40 for process rates in excess of 30 tons per hour.  
 $A$  = 4.10 for process weight rates up to 30 tons per hour or 55.0 tons per hour for process weight rates in excess of 30 tons per hour.  
 $B$  = 0.67 for process weight rates up to 30 tons per hour or 0.11 tons per hour for process weight rates in excess of 30 tons per hour.  
 $P$  = process weight rate in tons per hour.
- D. Subject to the provisions of Paragraph 14.a. of the Consent Decree, Chemetco shall compute and store the allowable emission rates for Furnaces No. 2 & 4 using the equation  $E = A(P)^B$ .
- $E$  = allowable emission rate in pounds per hour.  
 $A$  = 2.54 for process weight rates up to 450 tons per hour or 24.8 tons per hour for process weight rates in excess of 450 tons per hour.  
 $B$  = 0.534 for process weight rates up to 450 tons per hour or 0.16 tons per hour for process weight rates in excess of 450 tons per hour.  
 $P$  = process weight rate in tons per hour.
- E. No later than 30 days after the end of a calendar quarter, starting with the calendar quarter containing the certification of the CPMMS, Chemetco shall submit to U.S. EPA a report for the calendar quarter of all one hour periods of particulate emissions rates ( pounds per hour) for each Process Emission Unit that were in excess of the limits established in Illinois Administrative Code Title 35, §212.321 or §212.322. The report shall include: date, time, magnitude of

particulate emission rate, the corresponding allowable emission rate, statements on the probable cause of the excess emissions, statements on any corrective action taken, claims for exemptions, and information on any periods of non-operation or malfunction of the CPMMS. The report should contain a signed statement certifying that "the information contained in the report is true, accurate, and complete." If there were no emission rates in excess of the allowable emission limits for the whole calendar quarter, Chemetco should report that fact.

#### VIII. Facility Changes

If during the duration of the Consent Decree, Chemetco materially changes the pollution control devices at its facility, Chemetco shall adjust, recalibrate, or recertify its CPMMS or install additional monitoring equipment if necessary, to accomplish the continuous mass monitoring requirements of this Decree.





P.O. Box 67 • Hartford, IL 62048  
618-254-4381 • 800-444-5564

RECEIVED

MAR 17 2000

AIR ENFORCEMENT DIVISION,  
U. S. EPA, REGION 5

March 14, 2000

U.S. EPA Region 5  
Attn: Nhien Pham  
AE-17J  
77 West Jackson Blvd.  
Chicago, IL 60604-3507

Dear Mr. Pham,

As discussed in Chemetco's letter to you dated March 1, 2000, the center crane bay of the foundry building was inspected and assessed on March 7, 2000. The assessment is attached. If the form and content of the assessment meets with your approval, Chemetco will proceed with drafting a report as outlined in Condition 15(3) of the Consent Order. The report shall include descriptions of proposed modifications, schedules for implementation, and cost estimates for the deficiencies noted in the assessment. It will be submitted to U.S. EPA well within the time frame established in the Condition 15 of the Consent Order.

If you have any questions regarding the attachment please contact me at (618) 254-4381 ext.372, as I would be happy to discuss them with you. I look forward to your review and approval of the attached assessment.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Kim Fock', is written over a faint, larger signature.

Kim Fock  
Manager, Engineering and Maintenance  
Chemetco, Inc.

Cc: Jeff Trevino, USEPA Region 5  
United States Department of Justice  
George von Stamwitz, Armstrong Teasdale



March 14, 2000

Mr. Kim Foch  
Chemetco  
P.O. Box 67  
Hartford, Illinois 62048

Dear Kim:

RE: Structural Inspection  
High Bay Between  
Column Lines B & C

Per your request Messrs. Warren Ogan and Tony Blaylock of our company conducted a visual structural inspection on March 7, 2000 of the high bay structural steel framing and roofing during Chemetco's scheduled maintenance shutdown.

Due to man-lift bulk and equipment restraints, furnace heat, time constraints and physical obstacles all structural members could not be reviewed "close up." Some members had to be observed from the elevated walkways; therefore, several dust-covered connections could not be checked for loose or missing bolts.

It has been determined however, based on the visual condition of the various structural members that the vast majority of roof members and roofing needs to be replaced. The following is a list of our findings with recommendations:

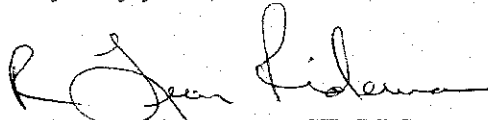
- 1) Existing roof joists between column lines B & C and extending from line 1 to line 11 have deteriorated to the point of requiring replacement. This should be done in the very near future.
- 2) Replace the roofing over this same area.
- 3) Replace the following damaged or missing lateral bracing:
  - A) Bracing between B-C & 5-7 as shown on attached sheet.
  - B) Bracing between B-C & 9-11 as shown on attached sheet.
- 4) We recommend an iron working crew be engaged to go through the high bay and check for any loose or missing bolts and make any required adjustments.

Mr. Kim Foch  
High Bay Structural Inspection  
Page 2

Per our previous report on the remainder of the building and our subsequent conversations, it has been decided that the most prudent course of immediate action is the design and installation of a new roof to be installed over the existing. By doing so: 1) the structural integrity of the existing will be preserved; 2) the building envelope will be maintained when the existing roof is removed from the inside; 3) safety will be provided for personnel working in the building; and 4) the useful life of the structure will be greatly extended.

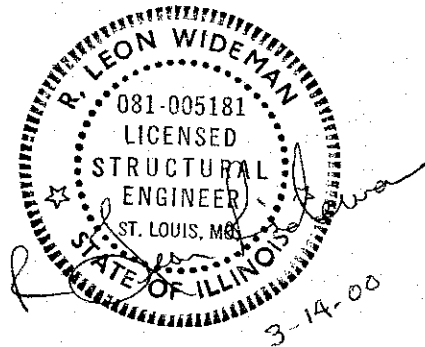
This report is an extension of our previous report and concludes our evaluation of the furnace building. Should you have any questions or if there needs to be any clarification of any of our findings, please do not hesitate to call. Thank you.

Very truly yours,



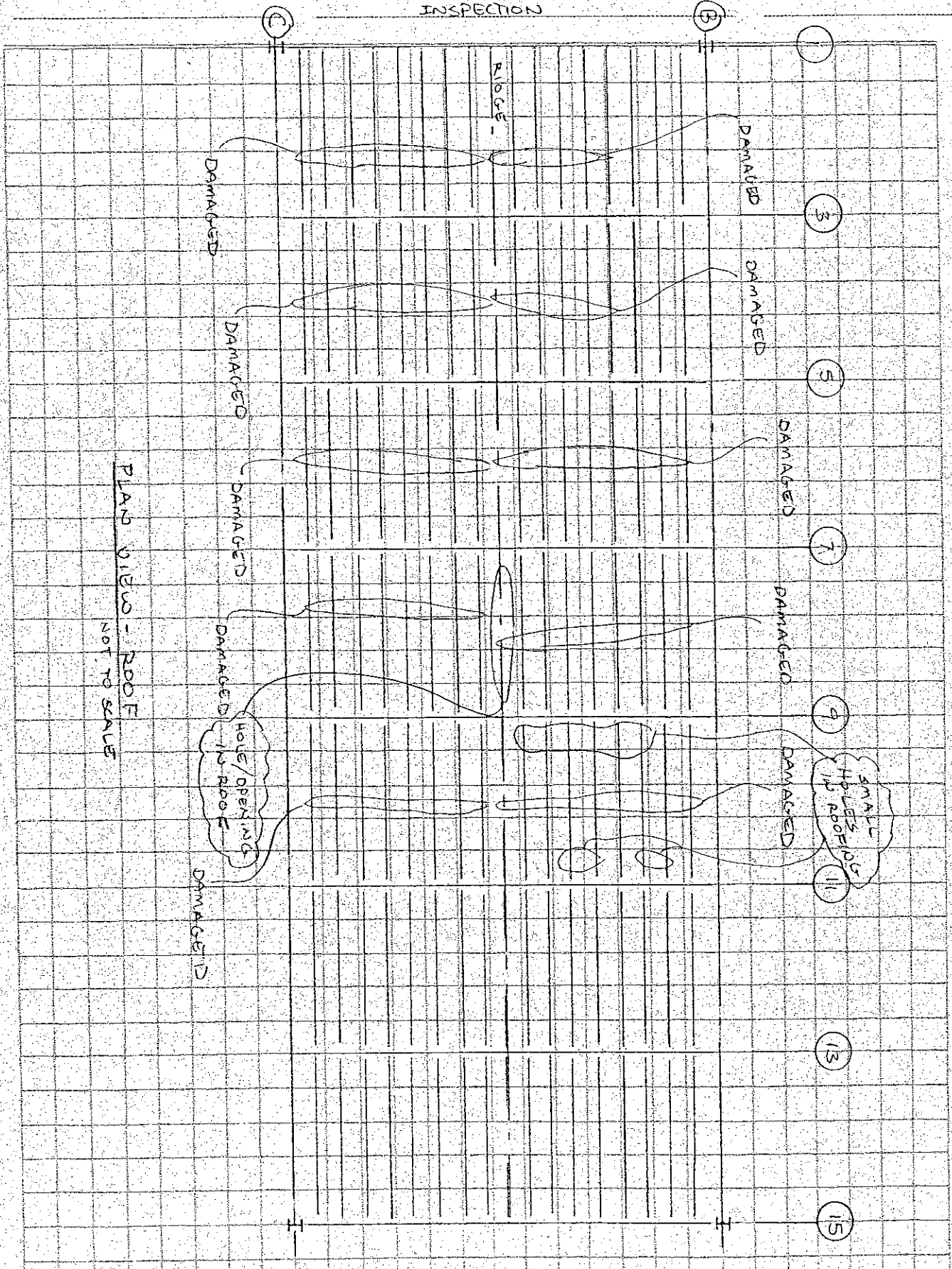
R. Leon Wideman, PE, SE, RLS  
WIDEMAN & ASSOCIATES, INC.

RLW:krb



WIDEMAN & ASSOCIATES, INC.  
ENGINEERS - CONSULTANTS  
5518 TELEGRAPH RD. • ST. LOUIS, MO 63129  
PH. 314-892-4200 • FAX 314-892-4577

BY TLB DATE 3/8/00 SUBJECT CHEMETCO SHEET NO. 1 OF 1  
ROOF AT HIGH BAY  
INSPECTION  
JOB NO. \_\_\_\_\_



WIDEMAN & ASSOCIATES, INC.  
ENGINEERS - CONSULTANTS  
5518 TELEGRAPH RD. • ST. LOUIS, MO 63129  
PH. 314-892-4200 • FAX 314-892-4577

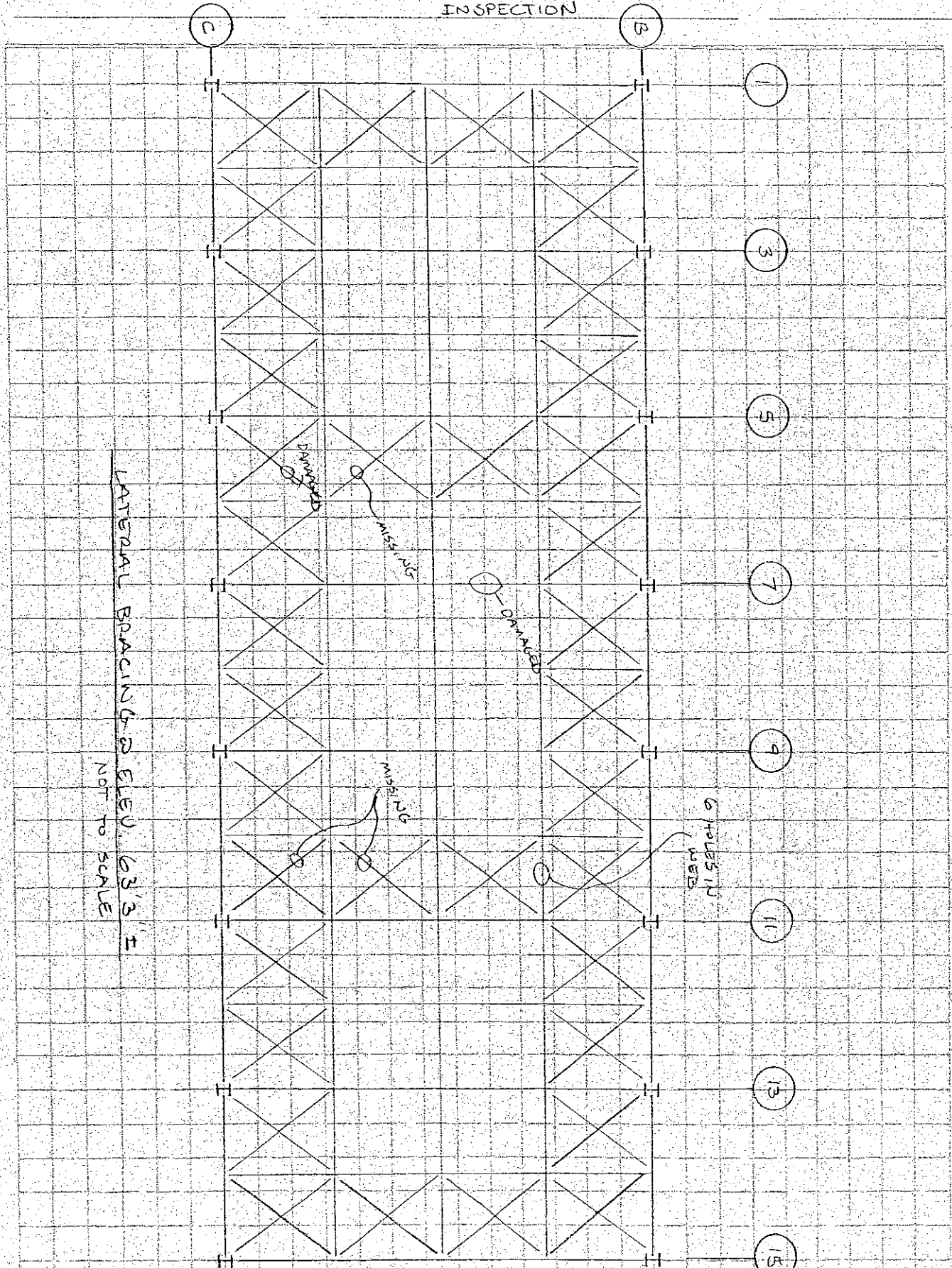
BY TLB DATE 3/8/00

SUBJECT CHEMETCO

SHEET NO. 2 OF

ROOF AT HIGH BAY  
INSPECTION

JOB NO. \_\_\_\_\_





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

MAR 26 2001

(AE-17J)

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

Kim Fock, Director of Environmental Health and Safety  
Chemetco, Inc.  
Route 3 and Oldenburg Road  
Hartford, Illinois 62048

Re: In the Matter of: Chemetco, Inc., Hartford, IL  
Consent Decree, CIV. NO. 93-482-WDS

Dear Sir/Madam:

We have reviewed the May 2000 Continuous Particulate Mass Monitoring Plan prepared by NPN Environmental. We approve the plan with the exception of NPN's recommendations for schedule. Please be advised that Chemetco is subject to the schedule specified in Paragraph 18 of the Consent Decree.

We have also reviewed the March 14, 2000, assessment of the roof and structural steel framing performed by Wideman and Associates. We approve the roof and structural steel assessment. However, Paragraph 15 of the Consent Decree specifies that the proposal is to include, at minimum, an assessment of the roof, structure, walls, baghouse, and duct work. The March 14, 2000, makes no reference to an evaluation of the baghouse and duct work. Please submit an evaluation of the baghouse, duct work, and any other Foundry components affecting the integrity of the secondary capture system, as required by Paragraph 15 of the Consent Decree, within 30 days of your receipt of this letter.

If you have any questions, please feel free to contact me at (312) 886-8812.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Brent Marable", written over a horizontal line.

Brent Marable, Chief

Air Enforcement and Compliance Assurance Section (IL/IN)

cc: Julie Armitage, Acting Section Manager  
Compliance and Systems Management Section  
Bureau of Air  
Illinois Environmental Protection Agency

John Justice, Manager  
Region 3  
Illinois Environmental Protection Agency

George M. von Stamwitz  
John F. Cowling  
Attorneys and Counselors  
Armstrong Teasdale LLP

standard bcc's:      official file copy w/attachment(s)

other bcc's:    J. Trevino, C-14J  
                  Greg Sukys, DOJ

Creation Date: 3/15/01	March 26, 2001
Filename:	A:\chemetcoammlet1.wpd
Legend:	ARD:AECAB:AECAS (IL/IN) :BUSH



CERTIFICATE OF MAIL

I, Betty J. Williams, certify that I sent the following information pursuant to the Clean Air Act by First Class Mail Requested, to:

Kim Fock, Director of Environmental Health and Safety  
Chemtco, Inc.  
Route 3 and Oldenburg Road  
Hartford, Illinois 62048

I also certify that I sent a copy of the following information pursuant to the Clean Air Act by First Class Mail Requested, to:

Julie Armitage, Acting Section Manager  
Compliance and Systems Management  
Bureau of Air  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Springfield, Illinois, 62072

John Justice, Regional Manager  
Region 3  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, Illinois 62234

George M. Von Stamwitz  
John F. Cowling  
Armstrong Teasdale LLP  
Attorneys and Counselors  
One Metropolitan Square  
St. Louis, MO 63102-2740

on the 27<sup>th</sup> day of March 2001.

*Betty J. Williams*  
Betty J. Williams  
AECAS (IL/IN)

Certified Mail Receipt Number: 70993400000095

<b>SENDER: COMPLETE THIS SECTION</b> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits.	
1. Article Addressed to: <i>Kim Fock Director of Environmental Health and Safety Chemtco, Inc. Route 3 and Oldenburg Road Hartford, Illinois 62048</i>	
2. Article Number (Copy from service label) <i>709934000000959119096</i>	PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789
<b>COMPLETE THIS SECTION ON DELIVERY</b> A. Received by (Please Print Clearly) _____ B. Date of Delivery _____ C. Signature <i>Harry Voelter</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below: _____	
3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	

U.S. Postal Service <b>CERTIFIED MAIL RECEIPT</b> (Domestic Mail Only; No Insurance Coverage Provided)	
Article Sent To: <i>Kim Fock, Dir. of Env. Health and Safety</i>	
Postage \$ <i>0.55</i>	Certified Fee \$ <i>1.90</i>
Return Receipt Fee (Endorsement Required) \$ <i>1.50</i>	Restricted Delivery Fee (Endorsement Required) \$ _____
Total Postage & Fees \$ <i>3.95</i>	
Name (Please Print Clearly) (to be completed by mailer) <i>Kim Fock - Chemtco, Inc.</i> Street, Apt. No., or P.O. Box No. <i>Route 3 and Oldenburg Road</i> City, State, ZIP+4 <i>Hartford, Illinois 62048</i>	
PS Form 3800, July 1999 See Reverse for Instructions	



# AIR AND RADIATION DIVISION CONCURRENCE SHEET

SUBJECT: CHMELCO - Letter approving Pm cem plan et al.

CONTROL NUMBER (if applicable): \_\_\_\_\_

	Name	Initials	Date
Typist	( Bus4 )	<u>BB</u>	<u>3/22/01</u>
Originator	( Bus4 )	<u>BB</u>	<u>3/22/01</u>
Reviewer	( J. Trevino, ORC )	<u>via email</u>	<u>3/21/01</u>
Reviewer	( )		
Section Secretary	(B. Williams )	<u>B31</u>	<u>3/26/01</u>
Section Chief	(B. Marable )	<u>LM</u>	<u>3/26/01</u>
Branch Secretary	(B. Mack )		
Branch Chief	(G. Czerniak )		
Division Secretary	(N. Karim )		
Associate Director	( )		
(if applicable)			
Division Director	(C. Newton )		

IF CONCURRENT SIGNOFF IS NECESSARY, PLEASE INDICATE NAME OF APPROPRIATE DIVISION(S)

## NAME OF DIVISION \_\_\_\_\_

Assigned Staff Person	( )		
Division Director	( )		
Other	( )		

## NAME OF DIVISION \_\_\_\_\_

Assigned Staff Person	( )		
Division Director	( )		
Other	( )		

## OFFICE OF THE REGIONAL ADMINISTRATOR

Deputy Regional Administrator	( B. Mathur )		
Regional Administrator	( D. Ullrich )		
Other	( )		
Other	( )		

The originator and first level supervisor are responsible for assuring that documents are in plain language. All other reviewers should consider plain language in their reviews. For more information, see the plain language checklist on the reverse side of this sheet.

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

RETURN TO: \_\_\_\_\_

## Plain Language Checklist

**Write in the active voice.** When you use the active voice, the subject of the sentence acts: "EPA issued the permit to X." When you use the passive voice, the subject of the sentence is acted upon: "The permit was issued to X." If you can ask "By whom?" or "By what?" after the verb, the verb is in the passive voice. A passive verb has a form of the verb "to be" (am, is, are, was, were, be, being, been) plus a main verb usually ending in "en" or "ed."

**Use action verbs.** Use base verbs instead of nouns derived from verbs.

Don't Say	Say	Don't Say	Say
is applicable to	applies to	make payment	pay
give consideration to	consider	take action	act

**Use personal pronouns to represent the reader and to refer to EPA.** For example, "The United States Environmental Protection Agency (EPA, we) is issuing an order to X (you, your). We are offering you..."

**Write short sentences to aid comprehension.** Put one main thought in most sentences. Divide a long sentence into two or three short sentences. Remove all unnecessary words. If there are several conditions or subordinate provisions, make a list.

**Omit surplus words and redundancies.** Question the need for each and every word.

Don't Say	Say	Redundancies
for the period of	for	true and correct
in order to	to	cease and desist
in the event that	if	order and direct

**Place words carefully to reduce ambiguity.** Keep subjects and objects close to verbs. Put modifying phrases and words such as "only" and "always" next to the word they modify. She *only* said that he hired her. She said that *only* he hired her. She said that he hired *only* her.

**Be consistent.** Don't use different words to refer to the same thing (car, vehicle, automobile).

**Limit your use of abbreviations and capital letters.** Use abbreviations only to refer to terms that are central to the document. Do not abbreviate terms that you only use a few times. Use capital letters to begin sentences and proper names and for headings. You should reconsider all other uses.

**Visit the plain language web site at [www.plainlanguage.gov](http://www.plainlanguage.gov).**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

OCT 03 2001

REPLY TO THE ATTENTION OF:

(AE-17J)

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

Kim Fock, Director of Environmental Health and Safety  
Chemetco, Inc.  
Route 3 and Oldenburg Road  
Hartford, Illinois 62048

Re: In the Matter of: Chemetco, Inc., Hartford, IL  
Consent Decree, CIV. NO. 93-482-WDS

Dear Mr. Fock:

The purpose of this letter is to approve the proposal and assessment of the baghouse and ductwork included in your March 1, 2000, submittal to us. The March 27, 2001, letter from me to you previously approved the proposal and assessment of the roof, walls, and structure. The March 1, 2000, and March 14, 2000, documents you submitted satisfy the requirements of Paragraphs 15(a)(1) and (a)(2) of the Consent Decree. Please submit the report required by Paragraph 15(a)(3) of the Consent Decree within 30 days of your receipt of this letter. The report must include descriptions of planned modifications, schedules for implementation, and cost estimates.

If you have any questions, please feel free to contact Bonnie Bush, of my staff, at (312) 353-6684.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Brent Marable".

Brent Marable, Chief  
Air Enforcement and Compliance Assurance Section (IL/IN)  
Air Enforcement and Compliance Assurance Branch

cc: Julie Armitage, Acting Section Manager  
Compliance and Systems Management Section  
Bureau of Air  
Illinois Environmental Protection Agency

John Justice, Manager  
Region 3  
Illinois Environmental Protection Agency

George M. von Stanwitz  
John F. Cowling  
Attorneys and Counselors  
Armstrong Teasdale LLP

standard bcc's: official file copy w/attachment(s)

other bcc's: J. Trevino, C-14J  
Greg Sukys, DOJ

Creation Date: 10/1/01	October 1, 2001
Filename:	C:\EPAWork\ENFORCE\chemetcoclet2.wpd
Legend:	ARD:AECAB:AECAS (IL/IN) :BUSH

CERTIFICATE OF MAILING

I, Betty J. Williams, certify that I sent a Request to Provide Information Pursuant to the Clean Air Act by Certified Mail, Return Receipt Requested, to:

Kim Fock, Director of Environmental Health and Safety  
Chemetco, Inc.  
Route 3 and Oldenburg Road  
Hartford, Illinois 62048

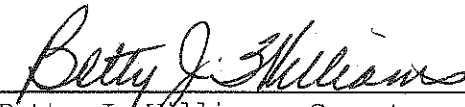
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Julie Armitage, Acting Section Manager  
Compliance and Systems Management  
Bureau of Air  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Springfield, Illinois, 62072

John Justice, Regional Manager  
Region 3  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, Illinois 62234

George M. von Stamwitz  
John F. Cowling  
Armstrong Teasdale LLP  
Attorneys and Counselors  
One Metropolitan Square  
St. Louis, MO 63102-2740

on the 3rd day of October 2001.

  
Betty J. Williams, Secretary  
AECAS (Illinois/Indiana)

Certified Mail Receipt Number: 7099 3400 0000 95864891



# AIR AND RADIATION DIVISION CONCURRENCE SHEET

SUBJECT: LETTER TO CHEMETCO, HARTFORD  
2 CAPTURE ASSESSMENT

CONTROL NUMBER (if applicable): \_\_\_\_\_

	Name	
Typist	( BUSH )	( )
Originator	( BUSH )	( )
Reviewer	( )	( )
Reviewer	( )	( )
Section Secretary	( B. Williams )	( )
Section Chief	( B. Marable )	( )
Branch Secretary	( B. Mack )	( )
Branch Chief	( G. Czerniak )	( )
Division Secretary	( N. Karim )	( )
Associate Director	( C. Newton )	( )
(if applicable)		
Division Director	( B. Mathur )	( )

IF CONCURRENT SIGNOFF IS NECESSARY, PLEASE INDICATE N

NAME OF DIVISION \_\_\_\_\_

Assigned Staff Person	( )	( )
Division Director	( )	( )
Other	( )	( )

NAME OF DIVISION \_\_\_\_\_

Assigned Staff Person	( )	( )
Division Director	( )	( )
Other	( )	( )

OFFICE OF THE REGIONAL ADMINISTRATOR

Deputy Regional Administrator (	( )
Regional Administrator	( )
Other	( )
Other	( )

The originator and first level supervisor are responsible for ass  
plain language. All other reviewers should consider plain lang  
For more information, see the plain language checklist on the r

COMMENTS: \_\_\_\_\_

RETURN TO: \_\_\_\_\_

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

2. Article Number (Copy from service label)

7099 3400 0000 9586 4891

4. Restricted Delivery? (Extra Fee)

☐ Yes

1. Article Addressed to:  
Kim Flock  
Director of Environmental  
Health and Safety  
Chemetco, Inc.,  
Route 3 and Oldburg Road  
Hartford, Illinois 62048

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

D. Is delivery address different from item 1? ☐ Yes ☒ No

If YES, enter delivery address below:

C. Signature

*Kim Flock*

☐ Agent

☐ Addressee

A. Received by (Please Print Clearly)

B. Date of Delivery

10-5-01

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COMPLETE THIS SECTION ON DELIVERY

U.S. Postal Service  
CERTIFIED MAIL RECEIPT  
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:

Postage

\$ 1.57

Certified Fee

2.10

Return Receipt Fee  
(Endorsement Required)

1.50

Restricted Delivery Fee  
(Endorsement Required)

Total Postage & Fees

\$ 4.17



Name (Please Print Clearly) (to be completed by mailer)  
Kim Flock - Chemetco, Inc.  
Street: No. or PO Box No.  
Route 3 and Oldburg Road  
Hartford, Illinois 62048  
City, State, Zip+4  
PS Form 3800, July 1999

See Reverse for Instructions

## Plain Language Checklist

**Write in the active voice.** When you use the active voice, the subject of the sentence acts: "EPA issued the permit to X." When you use the passive voice, the subject of the sentence is acted upon: "The permit was issued to X." If you can ask "By whom?" or "By what?" after the verb, the verb is in the passive voice. A passive verb has a form of the verb "to be" (am, is, are, was, were, be, being, been) plus a main verb usually ending in "en" or "ed."

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**Visit the plain language web site at [www.plainlanguage.gov](http://www.plainlanguage.gov).**





# ST. LOUIS POST-DISPATCH

Good Afternoon, St. Louis | Monday, November 5, 2001

## St. Louis Post-Dispatch Archives | Search Results

8 matches were found for "(YMD\_date=(01/01/2001 - 12/31/2001)) and ("Chemetco")"

Article 1 of 8 | Your search term(s) appeared time(s) in this article.

### DURBIN CALLS FOR QUICK ACTION TO BOOST ECONOMY

Robert Kelly Of The Post-Dispatch St. Louis Post-Dispatch (MO)	November 3, 2001  Section: NEWS	Edition: ILLINOIS FIVE STAR LIFT Page 14	Word count: 700  ID#: 0111030460
--	---------------------------------------	--	--

\* He tells area business leaders that he backs targeted tax cuts and government spending to help displaced workers.

Various ways to stimulate the lagging economy are being considered by Congress, and action should be taken soon to avoid a deep recession, Sen. Dick Durbin, D-Ill., told a group of area business leaders Friday in Collinsville.

Durbin, who grew up in the East St. Louis area, said he was sensitive to the problems of the Metro East area - particularly in light of the recent

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**Article 2 of 8** | Your search term(s) appeared time(s) in this article.

## **AUTHORITIES WILL PRESS CHEMETCO FOR CLEANUP AT CLOSED PLANT SITE**

Robert Kelly Of The Post-Dispatch St. Louis Post-Dispatch (MO)	November 1, 2001  Section: METRO	Edition: ILLINOIS FIVE STAR Page B1	Word count: 590  ID#: 0111010359
--	--	---	--

Authorities say they will continue to press for a full cleanup of hazardous materials at the plant site being abandoned by Chemetco Inc. near Hartford in Madison County.

Chemetco, a large copper smelter, shut down operations on Wednesday and laid off its more than 100 employees. The employees had been notified late Tuesday that the plant was closing and that the company was expected to file for bankruptcy.

The weak national economy and a \$3.8 million federal fine for illegally dumping

**Download the full text of this story (\$1.95).**

Don't have a user name and password? Sign up here.

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**Article 3 of 8** | *Your search term(s) appeared time(s) in this article.***AUTHORITIES WILL PRESS SMELTER TO CLEAN UP  
PLANT SITE IT CLOSED**

Robert Kelly Of The Post-Dispatch St. Louis Post-Dispatch (MO)	November 1, 2001  Section: METRO	Edition: FIVE STAR LIFT Page B3	Word count: 601  ID#: 0111010335
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Authorities say they will continue to press for a full cleanup of hazardous materials at the plant site being abandoned by Chemetco Inc. near Hartford in Madison County.

Chemetco, a large copper smelter, shut down operations on Wednesday and laid off its more than 100 employees. The employees had been notified late Tuesday that the plant was closing and that the company was expected to file for bankruptcy.

The weak national economy and a \$3.8 million federal fine for illegally dumping

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**Article 4 of 8** | Your search term(s) appeared time(s) in this article.

## CHEMETCO WILL CLOSE PLANT NEAR HARTFORD, OFFICIALS SAY

Robert Kelly And Gregory Cancelada Of The Post-Dispatch St. Louis Post-Dispatch (MO)	October 31, 2001  Section: NEWS	Edition: ILLINOIS FIVE STAR Page A1	Word count: 927  ID#: 0110310377
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Burdened by a weak national economy and a \$3.8 million federal fine for illegally dumping metal-filled wastewater, Chemetco Inc. will close its plant today and file for bankruptcy, state and county officials say.

The number of people to be laid off today was unavailable, but the copper-smelting company had 157 employees last year.

Chemetco, located off Illinois Route 3 south of Hartford, has stopped accepting new materials and could file for bankruptcy today, said Dennis McMurray, a

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**Article 5 of 8** | Your search term(s) appeared time(s) in this article.

## CHEMETCO WILL CLOSE PLANT NEAR HARTFORD, OFFICIALS SAY

Robert Kelly And Gregory Cancelada Of The Post-Dispatch St. Louis Post-Dispatch (MO)	October 31, 2001  Section: METRO	Edition: THREE STAR Page B4	Word count: 417  ID#: 0110310340
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Burdened by a weak economy and a \$3.8 million fine for illegally dumping metal-filled wastewater, Chemetco Inc. will close its plant today and file for bankruptcy, state and county officials say.

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**Article 6 of 8** | Your search term(s) appeared time(s) in this article.**CLEANUP AT SMELTING PLANT IS UNDER WAY**

Robert Kelly Of The Post-Dispatch St. Louis Post-Dispatch (MO)	October 15, 2001  Section: ST. CLAIR-MONROE POST	Edition: FIVE STAR LIFT Page 1	Word count: 873  ID#: 0110150424
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The worst of the hazardous waste has been removed from Long Lake, a state environmental official said last week, nearly a year after a federal judge fined the Chemetco Inc. copper smelting plant in Madison County and ordered the company to clean up.

Even so, added Maggie Carson, the spokeswoman for the Illinois Environmental Protection Agency, "We just don't know if it's all adequately cleaned up or not."

The company was fined \$3.8 million for installing a secret pipe

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**Article 7 of 8** | Your search term(s) appeared time(s) in this article.**ILLINOIS DEATHS**

St. Louis Post-Dispatch (MO)	August 8, 2001  Section: METRO	Edition: ILLINOIS FIVE STAR Page B4	Word count: 1061  ID#: 0108080314
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**ALTON**

Fannie E. Graziana, 89, retired from Snyders Department Store, died Monday. Visitation 4-8 p.m. today at Elias-Smith Funeral Home. Funeral 11 a.m. Thursday at Messiah Lutheran Church. Burial at Rose Lawn Memory Gardens. Memorials to St. Anthony's Hospice or Messiah Lutheran Church.

**BELLEVILLE**

Sophia M. Guzior, 93, died Sunday. Visitation 8-9:45 a.m. today at George Renner and Sons Funeral Home. Funeral Mass 10 a.m. today at St. Peter Cathedral. Burial at Green Mount Catholic

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Regional/Business

## **Chemetco Inc. Shuts down Plant; Fines for Polluting Lake Part of Cause**

By Jayne Matthews

jmatthews@bnd.com

11/01/2001

Belleville News-Democrat (IL)

5B

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A secret pipeline that sneaked lead, cadmium and zinc oxide into Long Lake for 10 years now has dumped unemployment on about 150 workers at a copper smelting plant near Hartford.

Chemetco Inc. shut down its furnace Wednesday in the face of a hobbled copper market, a \$3.86 million criminal fine and still undetermined millions in cleanup costs and possible losses in pending civil lawsuits, state officials said.

In more prosperous times, the 31-year-old plant extracted 300 tons of copper daily from various scrap metals. Its multimillion dollar troubles began in 1996, with the discovery of an illegal, 10-inch pipeline that secretly had been carrying polluted wastewater to Long Lake for a decade.

Criminal action against the company ended in October 2000. Chemetco's closing on Wednesday left state lawyers with doubts about collecting money, while state environmentalists wondered who will monitor and control remaining pollution.

The property still holds large heaps of zinc oxide and a pond filled with wastewater from the plant's furnace cooling system, said Dennis McMurray, a spokesman in Springfield for the Illinois Environmental Protection Agency.

"We're concerned about the site being kept secure and the contamination being spread to other sites near the lake," McMurray said.

Current owner John Suarez told federal EPA inspectors on Tuesday that he planned to close the plant and file for bankruptcy in federal court, McMurray said.

Bankruptcy by Chemetco will not kill the civil lawsuits already filed by lakeside property owners, the U.S. Justice Department and state and federal environmental agencies. But final financial penalties are in doubt, said Jim Morgan, an environmental lawyer with the Illinois attorney general's office.

"As a practical matter ... the likelihood of our collecting any penalty we eventually get is remote," Morgan said.

Lead, cadmium and an estimated 30,000 cubic feet of zinc oxide were among the pollutants

slipped into Long Lake's wetlands --- and eventually the Mississippi River --- through the pipeline installed by former owner Denis Feron in 1986. Feron, 73, fled during the criminal investigation, probably to his native Belgium, but remains under federal indictment, Morgan said.

The company and four former employees a year ago pleaded no contest to conspiracy and criminal violation of environmental laws. A federal judge imposed a \$3.86 million fine on Chemetco and ordered it to clean up the property to standards demanded by the EPA.

The closing of the plant came 16 days after Chemetco officials walked away from negotiations with the state EPA on procedures for cleaning up and controlling air and water pollution. The company did not want to be held to all the standards of the federal Resources and Conservation Act, Morgan said.

Chemetco's current owner did not respond to phone inquiries Wednesday.

The extent and cost of the cleanup has not been determined, Morgan said. He said the company now is three weeks overdue with a report on how much pollution still remains in Long Lake.

Chemetco also faces legal action before the state Pollution Control Board over the amount of money it is supposed to have in a trust fund for pollution cleanup.

The state contends the Chemetco fund should contain \$8 million. At last report, the fund had \$400,000, Morgan said.



METRO

**Authorities Will Press Smelter to Clean up Plant Site it Closed**

Robert Kelly Of The Post-Dispatch

11/01/2001

St. Louis Post-Dispatch

FIVE STAR LIFT

B.3

(Copyright 2001)

Authorities say they will continue to press for a full cleanup of hazardous materials at the plant site being abandoned by Chemetco Inc. near Hartford in Madison County.

Chemetco, a large copper smelter, shut down operations on Wednesday and laid off its more than 100 employees. The employees had been notified late Tuesday that the plant was closing and that the company was expected to file for bankruptcy.

The weak national economy and a \$3.8 million federal fine for illegally dumping metal-filled waste water combined to push Chemetco to bankruptcy, state and county officials said.

Even so, James R. Morgan, an assistant Illinois attorney general, said Wednesday that state and federal prosecutors likely would continue to press Chemetco to pay the court-imposed fine and to keep cleaning up piles of hazardous slag at the plant site, which is off Illinois Route 3 near Oldenburg Road, south of Hartford.

"We can proceed with our enforcement actions against the company and get a judgment against it" even if Chemetco's assets are involved in a bankruptcy filing, Morgan said.

He said a court could compel Chemetco to use whatever assets it has to satisfy the earlier court rulings against the company.

The Illinois EPA has been supervising a cleanup at the plant site that was ordered by a federal judge a year ago. The judge imposed the fine because Chemetco built a secret pipe that dumped the toxic waste water for a decade in the late 1980s and early 1990s. The pipe was discovered during a regular EPA inspection.

Piles of hazardous zinc oxide remain at the plant site, officials said.

Chemetco officials were unavailable for comment on the plant closing, which became official when the last shift left work at 3 p.m. Wednesday. "Management has no comment," said a woman who answered the phone at the plant and declined to identify herself.

A plant security officer asked a reporter to leave the parking lot when employees left the plant. "There was no formal explanation" of the layoffs or the company's bankruptcy action, one employee said. He declined to identify himself.

Don Miller, president of the Growth Association of Southwestern Illinois, said the closing of the Chemetco plant caught his agency by surprise. He said he later learned from company officials that its market for copper goods had virtually collapsed since this summer.

Miller said he was unsure of the overall economic impact of the plant's closing in light of Chemetco's recent financial problems. "Certainly we're going to miss the 100 or more jobs, but in the long term, something good could come out of it," he said.

He said that if the Chemetco plant site is cleaned up that hotels, motels and other service industries might be attracted to the area. The plant site is just across Route 3 from the Lewis and Clark Historic Site, where an interpretive center is under construction, Miller noted.

## NEWS

### **Chemetco Will Close Plant near Hartford, Officials Say ; \$3.8 Million Fine, Poor Economy Are Cited**

Robert Kelly And Gregory Cancelada Of The Post-Dispatch

10/31/2001

St. Louis Post-Dispatch

ILLINOIS FIVE STAR

A.1

(Copyright 2001)

Burdened by a weak national economy and a \$3.8 million federal fine for illegally dumping metal-filled wastewater, Chemetco Inc. will close its plant today and file for bankruptcy, state and county officials say.

The number of people to be laid off today was unavailable, but the copper-smelting company had 157 employees last year.

Chemetco, located off Illinois Route 3 south of Hartford, has stopped accepting new materials and could file for bankruptcy today, said Dennis McMurray, a spokesman for the Illinois Environmental Protection Agency.

Company executives did not return phone calls Tuesday.

The Chemetco layoffs follow the loss of 550 jobs in the area in August when Laclede Steel Co. of Alton declared bankruptcy and shut down its mill.

"Alton has suffered quite a bit recently. It's a big blow to the local economy," said David Stoecklin, program administrator with the Madison County Employment and Training Department.

He said the county agency would do its best to help Chemetco workers find jobs or receive retraining. The agency's services range from help with writing resumes to providing money for education.

Company owner John Suarez of Ladue met with state EPA officials on Tuesday to tell them of his plans to close the plant, McMurray said.

The EPA has been supervising a cleanup at the plant site ordered by a federal judge a year ago. The agency imposed the fine because Chemetco built a secret pipe that illegally dumped the toxic wastewater.

Piles of hazardous zinc oxide populate the plant site, and the EPA likely will continue to push for a cleanup even if the plant is closed, McMurray said.

"We're certainly concerned about the material," he said. "We'll certainly be trying to contact the company's lawyers to determine what type of bankruptcy is filed."

A spokesman for the Illinois attorney general's office said he was unsure whether bankruptcy would affect the fine or cleanup.

Chemetco is appealing the \$3.8 million fine imposed last October by U.S. District Judge William D. Stiehl. The case was argued before the 7th U.S. Circuit Court of Appeals in Chicago in April; the appellate court has yet to rule.

Stiehl called the pipe's installation willful and egregious, but at the time he imposed the fine, he said he didn't want to bankrupt the company. Prosecutors had recommended a fine of about twice the amount imposed.

On top of the fine, the economic slowdown has caused the price of industrial metals such as copper to tumble, further hurting Chemetco's revenue. The price of copper has fallen 25 percent since the end of last year.

Former Chemetco owner Denis Feron ordered the pipe installed in 1986 to connect one of the plant's wastewater basins to Long Lake, north of Interstate 270. Collected rainwater contaminated by metals and water used in the smelting process were dumped into Long Lake through the pipe.

The worst of the hazardous waste has been removed from the lake, a state environmental official said early in October. But officials would not declare the site safe.

Chris Cahnovsky, a spokesman for the IEPA's regional office at Collinsville, said his agency was still investigating whether any hazardous waste had leached off Chemetco's property.

"We haven't found any levels that would be any health risk," he said.

He said samples also had been taken from fish caught in the Pontoon Beach recreational part of Long Lake, where fishing is permitted, and no hazardous levels of chemicals had been found.

Cahnovsky said the 10-inch pipe discharged pollutants from 1986 until IEPA authorities discovered it 10 years later during a regular inspection. No reports of illness or injury have been linked to the pollutants, officials said.

Chemetco officials initially called the dumping an accident. But the company pleaded guilty last year of criminal violation of the federal Clean Water Act and of lying to officials about the pipe. Five former workers were sentenced to probation or in-home detention for their part in the dumping.

Feron, Chemetco's former owner, has been charged with criminally violating the Clean Water Act. He sold the company to Suarez in 1993. Feron has not been arrested, and officials believe he is living in Ireland or his native Belgium.

Authorities said they had no evidence that Suarez knew about the discharge pipe installed while Feron owned the company.

PHOTO; Caption: Color Photo by DAVID CARSON/POST-DISPATCH -Officials are expected to announce today the closing of the Chemetco copper- smelting plant near Hartford, Ill. Last year, the company had more than 150 employees. The company was fined \$3.8 million last year for violating the Clean Water Act.

Regional/Business

**Chemetco, Agency Stall over Cleanup; Contaminants at Long Lake at Issue**

Associated Press

10/16/2001

Belleville News-Democrat (IL)

3B

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HARTFORD --- Chemetco Inc. and state officials are at an impasse over the cleanup of Long Lake, contaminated by hazardous waste dumped illegally by the copper smelting company for 10 years before regulators found out.

Chemetco walked away from talks with state and federal officials last summer over how and to what extent they must remove contaminants, said Patrick M. Flynn, the company's lawyer.

The talks were part of an effort to settle a civil lawsuit filed against the company by the U.S. Justice Department and state and federal environmental regulators, before the case goes to trial in April.

In 1996, state EPA workers found a secret pipe leading from Chemetco's factory to wetlands that fed Long Lake, a tributary of the Mississippi River. By that time, regulators estimate at least 30,000 cubic feet of zinc oxide had seeped into the lake bed over the previous decade.

The company was fined \$3.86 million earlier this year for conspiracy and violating the federal Clean Water Act.

Four Chemetco workers were convicted of conspiracy in the case, sentenced to home detention and fined. Former Chemetco President Denis L. Feron, who prosecutors say ordered the pipeline, remains a fugitive.

The company was put on probation for 5 years and ordered to comply with an IEPA plan to clean up the contaminated area. Any settlement reached last summer in the civil case would have fulfilled that requirement in the criminal case, as well, said Jim Morgan, the assistant Illinois attorney general representing the IEPA in the case.

But talks broke down over the company's demand that they help select the clean water standards that any cleanup would have to meet, Flynn said.

"The EPA wanted to leave that open, subject only to their discretion," he said. "We weren't comfortable with that."

The company says it already has cleaned up part of the lake and a neighboring wetland where the pipe was located.

IEPA regulators are waiting for test results that show the water in the "impoundment area" is clean, said Chris Cahnovsky, an IEPA field worker who monitors the case.

But the sticking point is what, if any, responsibility the company has for the rest of the lake, only part of which is on their property.

Flynn said it's not been proven there are any contaminants in the rest of the lake.

But Cahnovsky and Morgan say Chemetco's samples from June 2000 showed hazardous levels of cadmium in the lake about 900 feet downstream of the impoundment area.

"To put it in the best light possible for Chemetco, there are contaminants in Long Lake that they haven't addressed yet," Morgan said.

ST. CLAIR-MONROE POST

**Cleanup at Smelting Plant Is under Way ; Company Was Fined Nearly a Year Ago, Ordered to Clean Up; Metals Polluted Wastewater**

Robert Kelly Of The Post-Dispatch

10/15/2001

St. Louis Post-Dispatch

FIVE STAR LIFT

1

(Copyright 2001)

The worst of the hazardous waste has been removed from Long Lake, a state environmental official said last week, nearly a year after a federal judge fined the Chemetco Inc. copper smelting plant in Madison County and ordered the company to clean up.

Even so, added Maggie Carson, the spokeswoman for the Illinois Environmental Protection Agency, "We just don't know if it's all adequately cleaned up or not."

The company was fined \$3.8 million for installing a secret pipe that illegally dumped metal-filled wastewater, polluting the site north of Interstate 270 off Oldenburg Road.

Carson said last week that data has yet to be fully analyzed from samples of water and materials removed from the site at times during the last year. But she noted that environmental officials believed the public is not in danger from any waste still there.

Chris Cahnovsky, a spokesman for the IEPA's regional office at Collinsville, said the part of Long Lake that was polluted by Chemetco's dumping is separate from another body of water also called Long Lake that is used recreationally at Pontoon Beach.

"They're not connected. It's like two different lakes," but with the same name, Cahnovsky said.

But he said the IEPA was investigating whether any hazardous waste had leached off Chemetco's property. "We haven't found any levels (of pollution off-site) that would be any health risk," he said.

He said samples also had been taken from fish caught in the Pontoon Beach recreational part of Long Lake, where fishing is permitted, and no hazardous levels of chemicals had been found in the fish.

Cahnovsky said the 10-inch pipe, which discharged pollutants at the Chemetco site from 1986 until authorities discovered it 10 years later, was located in an unpopulated area about two miles north of I- 270 and 300 feet south of the Chemetco plant off Oldenburg Road. No reports of illness or injury have been linked to the pollutants, officials said.

Chemetco is appealing the \$3.8 million fine imposed in October 2000 by U.S. District Judge



William D. Stiehl. The case was argued before the 7th U.S. Circuit Court of Appeals in Chicago in April and a decision on the appeal of the fine has yet to be returned by the appellate court.

Stiehl called the pipe's installation willful and egregious but said he didn't want to bankrupt the company and put its more than 150 workers out of work. Prosecutors had recommended a fine of about twice the amount imposed.

Former Chemetco owner Denis Feron ordered the pipe installed in 1986 to connect one of the plant's wastewater basins to Long Lake. Collected rainwater contaminated by metals and water used in the smelting process was dumped into Long Lake through the pipe.

After 10 years, zinc, lead and cadmium five feet deep were found in the lake. Exposure to high levels of these metals can damage the lungs, kidneys and digestive tract, research shows.

Chemetco extracts copper from scrap metal in high-temperature furnaces.

As part of the sentence, it must clean the site as specified by the I EPA. Field workers for the IEPA discovered the pipe in 1996 during a routine inspection.

After initially calling the dumping an accident, Chemetco pleaded guilty in January 2000 to criminal violation of the Clean Water Act and lying to officials about the pipe. Five former workers received probation or in-home detention for their part.

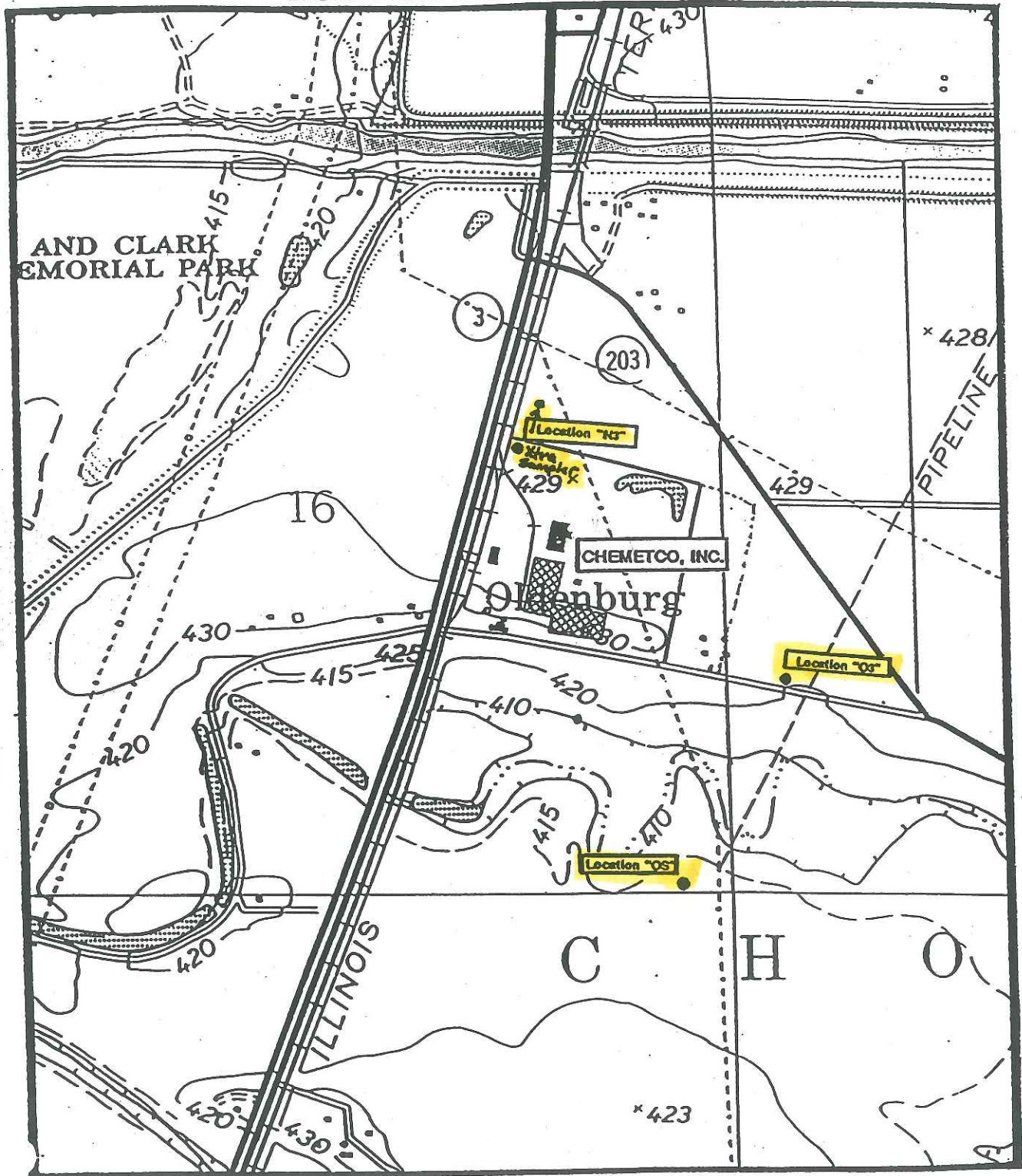
Feron also has been charged with criminally violating the federal Clean Water Act. He sold the company to John Suarez of Ladue in 1993. Feron has not been apprehended and is believed to be living in Ireland or his native Belgium.

Authorities said they had no evidence that Suarez knew about the discharge pipe.

MAP; Caption: Post-Dispatch Color Map - HAZARDOUS WASTE CLEANUP Two-part map Part 1 - Map of the north St. Louis, east Illinois area near East I- 270 and the Mississippi River. Map shows the general location of the Chemetco plant. Part 2 - Area of detail map showing the location of the Chemetco plant on Oldenburg Road, east of Route 3 and north of I-270. It also shows the smaller Long Lake which follows Old Alton Road.



FIGURE 1-1  
MONITORING SITE LOCATIONS



NOV-28-2001 14:44

FROM: Karbal, Cohen, Economou &amp; Dunne

+312 431 3670

T-123 P.002/004 F-282

05-RIN-00299-02

KARBAL, COHEN, ECONOMOU & DUNNE  
200 S. MICHIGAN, 21<sup>ST</sup> FLOOR  
CHICAGO, ILLINOIS 60604

WPT  
W  
A

ADAM R. LUNGE  
DIRECTOR (312) 431-8024  
Fax: (312) 431-0087  
alunge@karbalhy.com

November 26, 2001

Regional Freedom of Information Officer  
U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

Re: Freedom of Information Act Request  
for Chemetco Industries and the Chemetco Facility Slag Heap

Dear Sir or Madam:

This firm represents a certain insurer that has received a claim from Chemetco Industries in connection with environmental contamination at the Chemetco Facility at or near Hartford, Illinois ("the Chemetco Facility"). By this letter, this firm is presenting a Request for Information under the Freedom of Information Act for information pertaining to a "slag heap" at the Chemetco Facility.

In order to fully appraise us of the nature of hazardous substances and conditions allegedly present at the site, as well as any proposed, currently implemented or completed clean-up procedures, we request all of the information you have in your possession relating to the above-mentioned sites including, but not limited to, the following information:

- (1) All documents which identify the location of the Chemetco Facility slag heap and containing information regarding:
  - a. any and all descriptions of operations at the site;
  - b. any and all documents related to the facilities' histories of waste disposal;
  - c. any and all documents which relate to any hazardous substances the facility used or produced during its manufacturing process or received from another facility, individual or corporation, the volume of the materials used, produced or received including the materials' toxicity, hazardous characteristics and process sources and the disposal or treatment of those materials either at the facility or at another location;

NOV 28 2001

C/A

NOV-28-2001 14:41

FROM: Karbal, Cohen, Economou &amp; Dunne

+812 431 3670

T-823 P.003/004 F-252

KARBAL, COHEN,  
ECONOMOU & DUNNE

November 26, 2001  
Page 2

- d. pollutants or contamination which have left the site including those materials which have reached off-site ground waters and surface waters;
- e. any inspection of the site for any reason by government agencies or units
- f. any permit applications submitted by and/or permits issued to any entity regarding the site;
- g. any reports of any kind submitted to any government agency on behalf of Chemetco Industries; and
- h. any documents containing information relating to legal actions involving the Chemetco Facility slag heap, including enforcement actions and variances, permit review and/or regulatory proceedings or criminal actions against Chemetco Industries, any of its officers or employees or anyone acting on Chemetco Industries' behalf.

(2) All documents and information including, but not limited to, preliminary and completed studies and technical reports related to the Chemetco Facility slag heap. This data should include, but not be limited to:

- a. any investigation, evaluation or assessment done at the request of the United States Environmental Protection Agency ("US EPA"), the State of Illinois ("Illinois") (and any of its departments, agencies or instrumentalities including, but not limited to, state environmental and health agencies) or any other public or private entity identifying or analyzing the substances present at the Chemetco Facility;
- b. reports and data prepared by or at the request of the US EPA, Illinois (and any of its departments, agencies or instrumentalities including, but not limited to, state environmental and health agencies) or any other public or private entity identifying or analyzing the substances present at the Chemetco Facility;
- c. reports and data prepared by or at the request of the US EPA, Illinois (and any of its departments, agencies or instrumentalities) including, but not limited to, state or private entity identifying or analyzing the risks to health or the environment posed by substances at or near the Chemetco Facility;
- d. documents relating to any proposals or claims for (i) the listing of the Chemetco Facility on Illinois' list of hazardous waste sites, or (ii) funds from any Illinois programs applicable to the clean up of hazardous wastes;
- e. documents describing the technologies and measures that the US EPA or Illinois (and any of its departments, agencies or instrumentalities including, but not limited to, state environmental and health agencies) have proposed.

NOV-16-2001 14:45

FROM: Karbal, Cohen, Economou &amp; Dunne

+312 431 3870

T-828 P.004/004 F-282

**KARBAL, COHEN,  
ECONOMOU & DUNNE**November 26, 2001  
Page 3

recommended, or agreed should be adopted for the closure and/or clean up of the Chemetco Facility;

f. documents pertaining to the permissible, prospective or possible future uses of the Chemetco Facility;

g. documents pertaining to the compliance or non-compliance of the Chemetco Facility or with applicable federal and state legal requirements; and

(3) All correspondence and other documents transmitted between Illinois and any of its departments, agencies or instrumentalities including but not limited to state environmental and health agencies and Illinois (and any of its departments, agencies or instrumentalities including, but not limited to, state environmental and health agencies) and the US EPA concerning:

a. the presence or release of hazardous substances at the Chemetco Facility;

b. actual or potential liability on the part of Chemetco Industries or any other person or entity for the presence or release of hazardous substances at the Chemetco Facility;

c. proposals for cleaning up or closing the Chemetco Facility; and

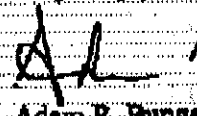
d. legal claims made in connection with the Chemetco Facility.

As there may be a large number of documents in regard to this matter, I would appreciate it if you could give me an estimate as to the number of pages, boxes or files that your agency has in regard to this matter. If your agency has an index for the file, I would appreciate it if you could forward a copy of it to me, as it may help to narrow the search. Additionally, should we decide to visit and review the file at one of your agency's offices, could you please inform me of your procedure for so doing.

We request your response as soon as possible and/or within the statutorily mandated time from your receipt of this request letter.

If you should have any questions, please do not hesitate to call me.

Very truly yours,

  
Adam R. Bunge  
Legal Assistant



NOV-26-2001 14:44

FROM: Karbal Cohen Economou &amp; Dunne

+312 431 8870

T-829 P-001/004 F-252

**KARBAL, COHEN, ECONOMOU & DUNNE, LLC**  
200 SOUTH MICHIGAN AVENUE, 21<sup>ST</sup> FLOOR  
CHICAGO, ILLINOIS 60604

**FACSIMILE MESSAGE**

Please deliver the following page(s) to:

Page 1

Name: FOIA Officer

Firm: US EPA

Fax No.: (312) 886-1515

Phone No.: (312) 353-3167

From: Adam Bunge

Date: November 26, 2001

Sender's No.: (312) 431-3627

Time: 1:49 PM

No. of Pages: 4  
(including cover)

Client/Matter No.: 1-061

**Message:**

Please see FOIA request enclosed herein.

If you have any problems with this transmittal,  
please call 312-322-8399.  
Our fax number is 312-322-8757.

**Confidentiality Note**

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivery of the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and return this original message to us at the above address via the U.S. Postal Service. Thank you.



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

AIR AND RADIATION DIVISION

REGULATION DEVELOPMENT BRANCH (AR-18J)

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

FAX #: (312) 886-5824

FAX TO: Bonnie BustOFFICE: AECAB FAX #: 3-8289PHONE #: 3-6684 DATE: 12/5/01FROM: Noeen UlemerPHONE #: (312) 353-8655 PAGES (including cover sheet): 6

## MESSAGE:

Bonnie,

Here is the copy of the FOIA.

Noeen



## Freedom of Information Act Request

05-RIN-00299-02

Requestor: ADAM BUNGE Request Date: 11/26/2001  
Company: KARBAL, COHEN, Date Received: 11/28/2001  
ECONOMOU & DUNNE  
Acknowledged: 11/28/2001

Fee Category: COMMERCIAL

Subject: CHEMETCO INDUSTRIES AND THE CHEMETCO FACILITY  
SLAG HEAP

Lead Office: 05-WPT

Assigned to: 05-AIR, 05-WATER, 05-WPT

Original Due Date: 12/27/2001 New Due Date:

Track: Fee Waiver Requested: NO

FIS Initials:

### SPECIAL INSTRUCTIONS:

1. SEPARATE REPLIES. 2. LEAD  
OFFICE ISSUE COMBINED BILLING.  
3. PROGRAM OFFICE SEND YOUR  
BILLING TO WPT, MARY  
VILLARREAL, HSM-7J, 6-7439. 4.  
CALL REQUESTOR WITH COST  
ESTIMATE.

REC'D BY:

DATE

*NW*  
11/29/01

Chemetco, Inc.  
State 02

## M E M O R A N D U M

Madison County - Chemetco Bankruptcy  
IL0025747

To: Bureau of Water - FOS/RU

From: Nick Mahlandt, BOW-Collinsville

Date: October 30, 2001

Interviewed: Heather Young, Environmental Manager  
Kim Fock, Plant manager  
John Suarez, Presidentxc: BOA/CES  
xc: CentralCC: Julie  
File  
"Chemetco"

On the above date, the regional office was advised that Chemetco was filing for bankruptcy and about to close the Route 3 facility. Mike Grant and Chris Cahnovsky, BOL; Jeff Benbenek, BOA; and I toured the site that afternoon. The following comments and observations were made:

We first visited the million gallon stormwater holding lagoon, where the return pump to the plant cooling water system was being used to spray the contents back to the lagoon. Ms. Young later stated that this was being done to prevent algal growth in the lagoon. The water level was near the top of the liner, and the total freeboard was approximately a foot. This lagoon receives the runoff from the earthen ditch along the north and east sides of the slag pile, and from the concreted ditch along the eastern portion of Oldenburg Road. Without the plant consumption of this stormwater, the lagoon berm will be breached. The nearest dry sections of Long Lake are some 400 feet to the SW and SE, but from the apparent topography the overflow would first go to the ditch along Oldenburg.

In the plant, which Mr. Fock mentioned as having 22 acres of paved or roofed area, the east/west and north/south canals were overflowing; and the concrete scrubber pit had less than a foot of freeboard. The BOL is concerned that these four canals are contaminated with ZnO. A portion of this scrubber water, quench water from the #3 scrubber, was being discharged to the ground via a broken overhead pipe. This water eventually flows to a pump sump behind the foundry building for discharge to the scrubber pit. In the area around the scrubbers, there was a quantity of scrubber sludge on the paving and there was an overflow of sludge from two of the collection boxes serving the #2 and #4 venturi scrubber systems. Any water from this sludge deposited area flows to the above noted sump. If this pump is not operated, this water will build up and eventually flow offsite, either directly or more likely via the east/west canals.

Chematco

Page 2

There are five sumps equipped with pumps for collecting water runoff from the interior of the plant. Three of these are to intercept flow along the portions of the perimeter not served by the ditches tributary to the stormwater holding lagoon, and the last two serve the area around the ZnO storage bunker. The SW (maintenance shop) sump and collection trench were overflowing. The rope oil skimmer at this sump was however in service. No water was in the ditch tributary to the NW sump, but the sump itself was full. Neither pumping system was in operation. The area surrounding the bunker SE sump was flooded, so it was assumed that that pump was also not in operation. The bunker NW and the perimeter SE sumps were not viewed.

All of these sumps are tributary to the in-plant water system, either the canals or the various tanks used in their foundry process. With no need for this water, it will eventually accumulate and after sufficient wet weather events, flow offsite. In this runoff could be any dust, scrubber sludge, metal fines, oils, etc. that it comes in contact with; and the potential for that is high. Mr. Fock mentioned that right now they consume approximately 180,000 gpd, and the majority of this water is from the stormwater retention system. He also commented that the amount of standing water on site today is because of the rainfalls of the past two weeks. The last rainfall event in this area would have been six days ago, on October 24th.

cc: BOW-Collinsville  
cc: DLC-Rich Warrington  
cc: BOA-Collinsville  
cc: BOL-Collinsville

1021 NORTH GRAND AVENUE, EAST  
P.O. BOX 19276  
SPRINGFIELD, IL 62794-9276  
217-524-0544 PHONE NUMBER  
217-782-6348 FAX NUMBER

**ILLINOIS  
ENVIRONMENTAL  
PROTECTION  
AGENCY**

# Fax

To: Bonnie Busch From: Julie Armitage/KB  
Fax: USEPA Pages: 2  
Phone: \_\_\_\_\_ Date: 12-12-01  
Re: \_\_\_\_\_ CC: \_\_\_\_\_

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

**IF ANY DIFFICULTY IS EXPERIENCED WITH THIS TRANSMISSION, PLEASE STOP AND CALL US AT  
217-524-0544.**

• **Comments:** \_\_\_\_\_



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2009 MALL STREET, COLLINSVILLE, ILLINOIS 62234

~~THOMAS V. SKINNER, DIRECTOR~~

ID #: 119 801 AAC

Name: Chemetco

Prog.: \_\_\_\_\_ Category: \_\_\_\_\_

618/346-5120

FAX: 618/346-5155

December 6, 2001

Mathis, Marifian, Richter and Grandy  
Attn: Laura Grandy  
720 West Main Street  
Suite 100  
Belleville, Illinois 62220

Re: Seal order entry authorization Chemetco, Inc.  
1198010003 - Madison County  
Chemetco, Inc.  
ILD048843809

CERTIFIED MAIL  
7099 3400 0002 6814 7752

CC: Brent M.  
USEA

F4I  
JCA

RECEIVED  
IEPA

DEC 14 2001

COLLINSVILLE OFFICE

Dear Ms. Grandy:

This letter is to authorize entry to the Chemetco, Inc. facility ("Facility"). The Facility was sealed by order of the Illinois Environmental Protection Agency, dated December 4, 2001 pursuant to 415 ILCS 5/34(b). The U.S. Trustee for the debtor Chemetco, Inc.'s estate, Laura K. Grandy, and her employees and agents, are hereby authorized to enter the Facility. Entry onto the Facility is expressly conditioned upon compliance with the terms and conditions stated in Attachment A to this letter.

This authorization is issued at the request of the authorized party. Entry onto the Facility is strictly at the authorized party's own risk and the Illinois EPA does not assume any liability associated with such entry.

If you have any questions regarding this matter, please feel free to contact me at 618/346-5120.

Sincerely,

Chris N. Cahnovsky, Regional Manager  
Field Operations Section  
Bureau of Land

CNC:jlb/chemetco seal auth 120601cnc  
Enclosure

Bcc: BOL - Division Files  
BOL - Collinsville  
Paul Purseglove

RECEIVED  
DEC 27 2001  
AIR ENFORCEMENT BRANCH  
U.S. EPA, REGION 5

James Morgan - IAGO  
Chris Perzan - DLC

RECEIVED  
Division of Legal Counsel

DEC 18 2001

GEORGE H. RYAN, GOVERNOR

## **ATTACHMENT A**

1. All personnel entering the Fines Storage/Processing Building, Slag Granulation and Processing Building and the Foundry Area must wear the appropriate level of respiratory protection for lead and cadmium exposure pursuant to U.S. Department of Labor Occupational Health and Safety Administration regulations.
2. All street sweeping equipment, rubber wheeled vehicles and track equipment must be decontaminated prior to removal from the sealed portions of the Facility. All decontamination residues must be managed pursuant to 35 Ill. Adm. Code Parts 703, 721, 722, 724, 724, 728 and 808 of the Illinois Pollution Control Board Regulations.
3. All hazardous materials and hazardous wastes removed from the sealed portions of the Facility must be packaged, labeled, marked and shipped pursuant to U.S. Department of Transportation and U.S. Environmental Protection Agency regulations.
4. No eating, drinking or smoking in the sealed portions of the Facility, except in the main office buildings.
5. Movement of scrap or other material and vehicular traffic must be conducted in a manner that will minimize the release of particulate fugitive emissions to the atmosphere. A Fugitive Emissions Control Plan, that will achieve a level of 95 percent control, must be submitted and approved by the Illinois Environmental Protection agency prior to removal of material from the Chemetco site.
6. All visitors entering into the sealed portions of the Facility must sign in at the security station and provide identification.
7. All personnel entering the sealed portions of the Facility must wear personal protective equipment that includes hard hats, safety glasses with side shields and hard-soled shoes. All safety equipment must meet and be used in accordance with all applicable U.S. Department of Labor Occupational Health and Safety Administration regulations.
8. All personnel not designated by this letter to enter the sealed portions of the Facility must obtain written permission from the Illinois Environmental Protection Agency (618) 346-5120.
9. No hunting, fishing or use of all terrain vehicles on the sealed portions of the Facility.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:

Chemetco, Inc. facility, Madison County.

)  
)  
)

**SEAL ORDER**

The Illinois Environmental Protection Agency ("Illinois EPA") issues this seal order pursuant to the authority vested in it by Section 34(b) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/34(b).

**I. DESCRIPTION AND LOCATION OF FACILITY**

The Chemetco, Inc. facility ("Facility") is located in Hartford, Madison County, Illinois. The portions of the Facility to which this seal order applies are as follows:

- a. All areas within the fencing in place surrounding the plant portion of the Facility as of the date of this order, excluding the main office. See Attachment A.
- b. The truck parking area consisting of fill and slag that is located to the south of the fenced portion of the Facility and is adjacent to Oldenberg Road. See Attachment B.
- c. The area impacted by the illegal discharge south of the fenced portion of the Facility, including the four containment areas and that portion of Long Lake owned by Chemetco, Inc. See Attachment C.
- d. The area containing the groundwater interceptor system, known as the SID system, located south of the fenced portion of the facility and east of the discharge area. See Attachment B.
- e. The surface impoundment located south of Oldenburg Road and east of the SID system. See Attachment B.

## **II. PARTIES BOUND**

This order is binding on and prohibits entry onto the sealed portions of the Facility for all persons except the following:

- a. Employees, authorized agents or contractors of the Illinois EPA.
- b. Employees, authorized agents or contractors of the United States Environmental Protection Agency.
- c. Local police, fire and emergency personnel entering in the course of their duties.
- d. Other persons who have received written authorization to enter the Facility from the Illinois EPA and who enter the Facility in a manner in accordance with any instructions contained within the written authorization.

## **III. FINDINGS**

1. The Facility is a former copper smelter located in Hartford, Madison County, Illinois. During its operation, the Facility generated sludges, baghouse dust, refractory brick, acids and other materials.
2. The operator of the Facility, Chemetco, Inc., filed bankruptcy under Chapter 7 in the U.S. Bankruptcy Court for the Southern District of Illinois on November 13, 2001 and is no longer managing the Facility.
3. The Facility has eight hazardous waste management units subject to closure requirements under the Resource Conservation and Recovery Act ("RCRA"). Closure has not been completed at any of these units.
4. A large pile of slag, estimated to be in excess of 100,000 tons, is located at the facility. This slag has tested as hazardous for the toxicity characteristic for lead. Slag fines are also located on the pile of slag.



5. A large bunker, known as the zinc oxide bunker, also contains sludges that have tested hazardous for the toxicity characteristic for lead.
6. Chemetco, Inc. pled guilty in the U.S. District Court for the Southern District of Illinois to violating the Clean Water Act by discharging wastewaters containing hazardous levels of lead and cadmium into a wetlands area and Long Lake over the course of approximately ten years. This discharge took place to the south of the fenced portion of the Facility, across Oldenberg Road and resulted in the deposition of hazardous contaminants in a wetlands area and Long Lake. The RCRA closure plan for the areas related to this discharge has not been completed.
7. A groundwater interceptor system, known as the SID system, is located to the south of the fenced portion of the facility and east of the discharge area.
8. A surface water impoundment is located to the south of the fenced portion of the Facility. This impoundment has received waters from the plant that may contain contaminants. The impoundment also does not have any physical barrier to access.
9. Fines and other materials containing hazardous levels of lead and cadmium are uncontained and located throughout the Facility.
10. The various contaminants described may become airborne and may be transported by flowing water.
11. The conditions at the Facility constitute an emergency that may pose an immediate threat to human health for any person entering into the Facility.

#### **IV. ORDER**

Pursuant to Section 34(b) of the Act the Facility is hereby sealed as indicated in this order, effective on the date of execution. Unauthorized entry into the areas described

in Section I is prohibited. This order shall remain in effect until rescinded by the Illinois  
EPA.

A handwritten signature in cursive script, appearing to read "Renée Cipriano", is written over a horizontal line.

Renée Cipriano  
Director

Dated: 12/4/01

# ATTACHMENT A

## KEY

- UNIT 1 - Zinc Oxide Bunker
- UNIT 2 - Zinc Oxide Lagoons
- UNIT 3 - Floor Waste Water Impoundment
- UNIT 4 - Cooling Water Canal

## SCALE

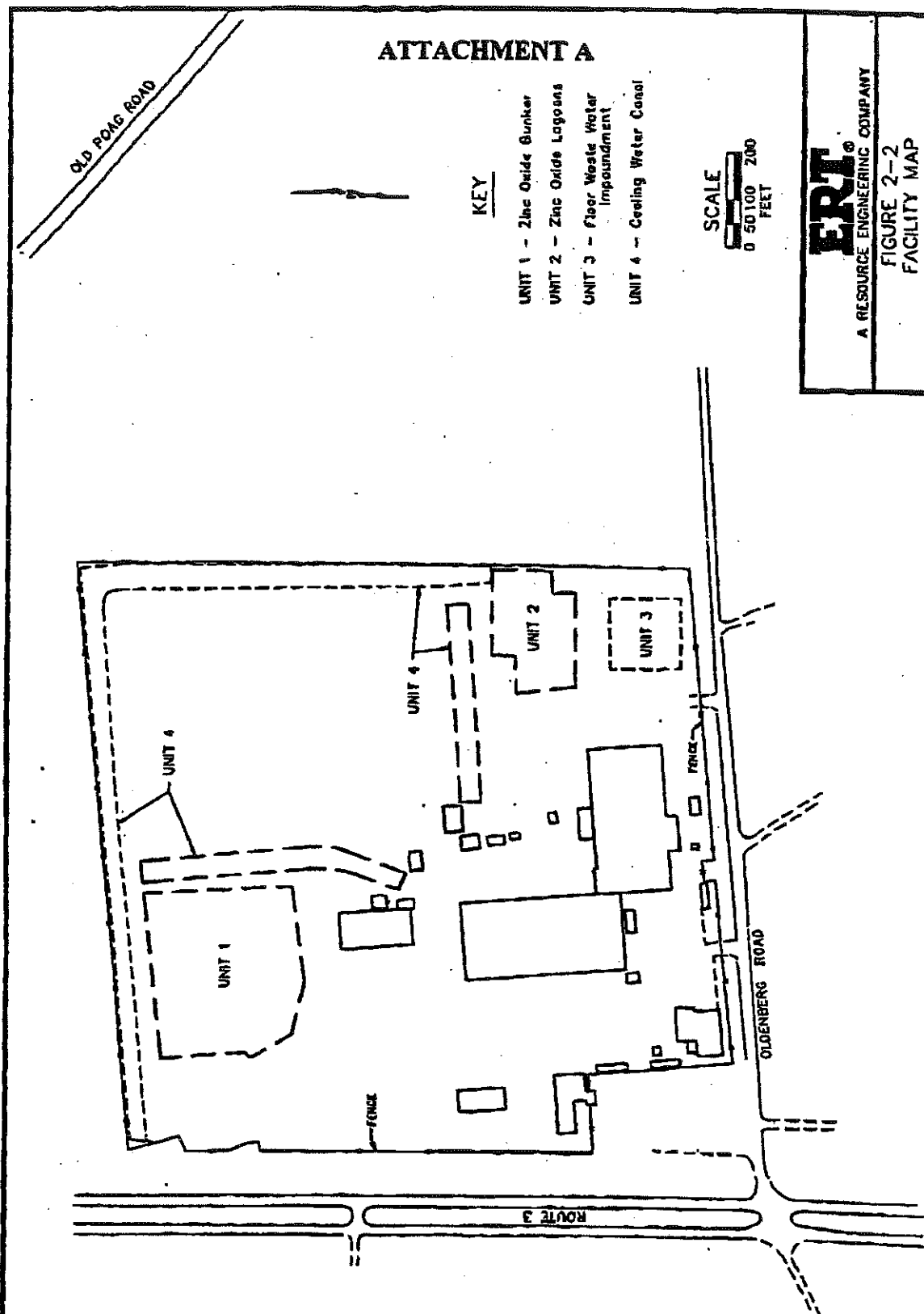


**ERT**<sup>®</sup>

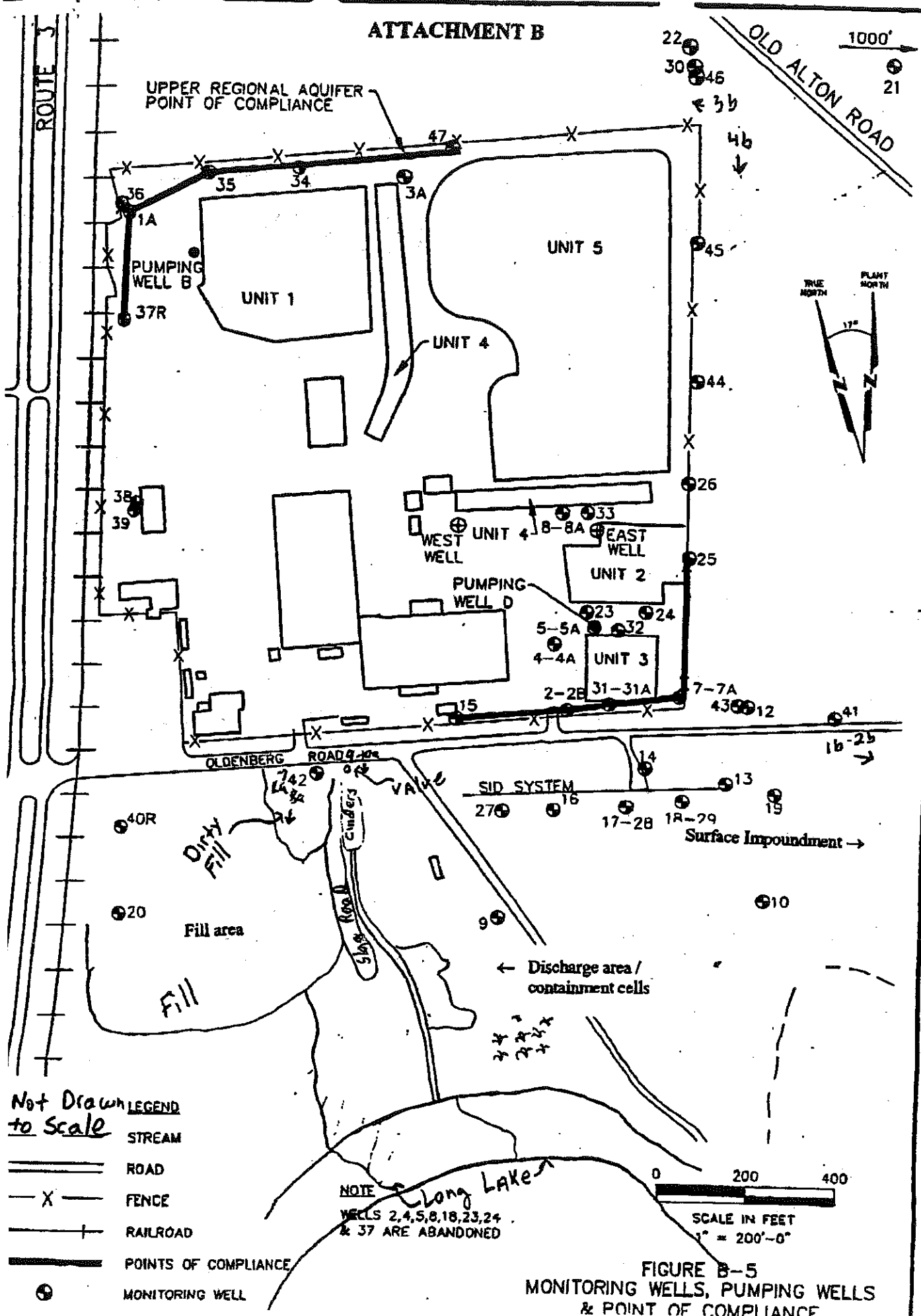
A RESOURCE ENGINEERING COMPANY

FIGURE 2-2  
FACILITY MAP  
CHEMETCO

DATE	5/88	PROJECT	1100-001-100
DRAWN BY	KLU		



## ATTACHMENT B









**RECEIVED**

AUG 03 2001

AIR ENFORCEMENT BRANCH,  
U.S. EPA, REGION 5

P.O. Box 67 • Hartford, IL 62048  
618-254-4381 • 800-444-5564

July 30, 2001

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: Second Quarter 2001 Ambient Air Monitoring Report

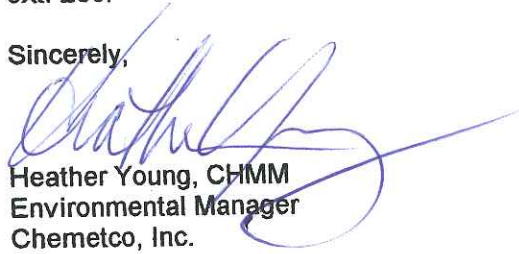
Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report April - June, 2001 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. This monitor is not included in the official approved ambient air monitoring program and is included as an attachment to this letter at the request of the Illinois EPA.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,



Heather Young, CHMM  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA--Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File

# 2001 2ND QUARTER AVERAGE CALCULATION

LOCATION Extra

DATE	TIME =ILTR NO FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
04/01/01	6048557*									No motor
04/07/01	6048558	10230.3	8785.3	1445	45.4	1968	242	0.12	9.40	
04/13/01	6048569*	10232.3	10232.3	0						Power failure
04/19/01	6048582**	11672.9	10232.3	1440.6	46	1988	21648	10.89	195.72	Upset Condition
04/25/01	6048569	13114.2	11674.2	1440	46	1987	5411	2.72	113.93	
04/28/01										Did not rerun
05/01/01	6048591	14555.3	13114.8	1440.5	46	1988	7845	3.95	172.80	
05/03/01	6048607***	15596.8	14556.8	1040	46	1435	25997	18.11	339.40	Undertime/Upset condition
05/07/01	6048611	17437.9	15997.9	1440	46.6	2013	231	0.11	30.60	
05/13/01	6048619	18878.8	17438.8	1440	46.6	2013	5905	2.93	61.05	Power failure
05/19/01										
05/25/01	6048691	20320.5	18880.4	1440.1	46	1987	6	0.00	11.57	
05/31/01	6048697	21761.6	20321.6	1440	46.6	2013	1755	0.87	44.31	
06/06/01	6048740	23202.6	21762.6	1440	46.6	2013	58	0.03	24.79	
06/12/01	6048747	24644.2	23204.7	1439.5	46	1987	44	0.02	60.06	
06/18/01	6048748	26085.5	24645.5	1440	46	1987	7410	3.73	148.80	
06/24/01	6048706	27526.9	26086.9	1440	46	1987	2508	1.26	52.79	
06/30/01	6048712	28988.5	27528.5	1460	46	2015	3248	1.61	77.68	
AVERAGE 1.45 67.31										

\*Not included in average due to reason noted

\*\*Cooling water to the snorkel for the #3 furnace shut down in the middle of a charge which caused the furnace to blow a hole in the snorkel caused compartments 2, 3, and 4 of #2 baghouse (foundry baghouse) to shut down because burnt bags were detected.

\*\*\*Flare out in #2 furnace and the baghouse fan went down on the roof baghouse. In addition, The primary baghouse at slag granulation went down with many bags being lost.



**AMBIENT AIR MONITORING**  
**QUARTERLY REPORT**  
**APRIL - JUNE 2001**  
**FOR**  
**TOTAL PARTICULATE**  
**AND LEAD**

**CHEMETCO, INC.**  
**July 2001**



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## **1.0 INTRODUCTION**

This document presents the summary of the first calendar quarter year 2001 ambient air monitoring performed at the Chemetco, Inc. facility in Madison County.

### **1.1 Monitoring Description**

The second quarter ambient air monitoring began on April 1, 2001, and sampling for total suspended particulates and lead in the particulate was performed on a once every sixth day basis. The quarterly sampling ended on June 30, 2001. Each day, a weather log was maintained documenting wind speed, wind direction, temperature, relative humidity and precipitation. Site data is utilized unless there is problem with the computer or program. In such a case, the information is obtained from the Nation Weather Service and recorded by the security guard. Chemetco also set up an account with the Midwest Climate Center who records data at two different locations near the facility. Chemetco has purchased a new weather station. The new weather station was set up during this quarter.

The location of the monitoring sites was based on a modeling report done by Versar, Inc. and approved by IEPA. All locations are shown on a map in Figure 1-1.

Standard operating procedures were followed for the filter conditioning, sampling, sampler operation, analyses, etc, are shown in Table 1.1. Complete copies of the SOP's were provided in the Ambient Air Monitoring Quality Assurance/Quality Control Plan.

### **1.2 Monitoring Report**

The following pages contain the results of the second quarter monitoring. Section 2 contains an accounting of all the test dates and reasons for eliminating data from certain test dates. Section 3 contains the quarterly averages, the quality assurance data and meteorological data. The Appendices include copies of the Filter Conditioning Logsheets with total suspended particulate calculation, the laboratory analysis, and the calculation worksheets.

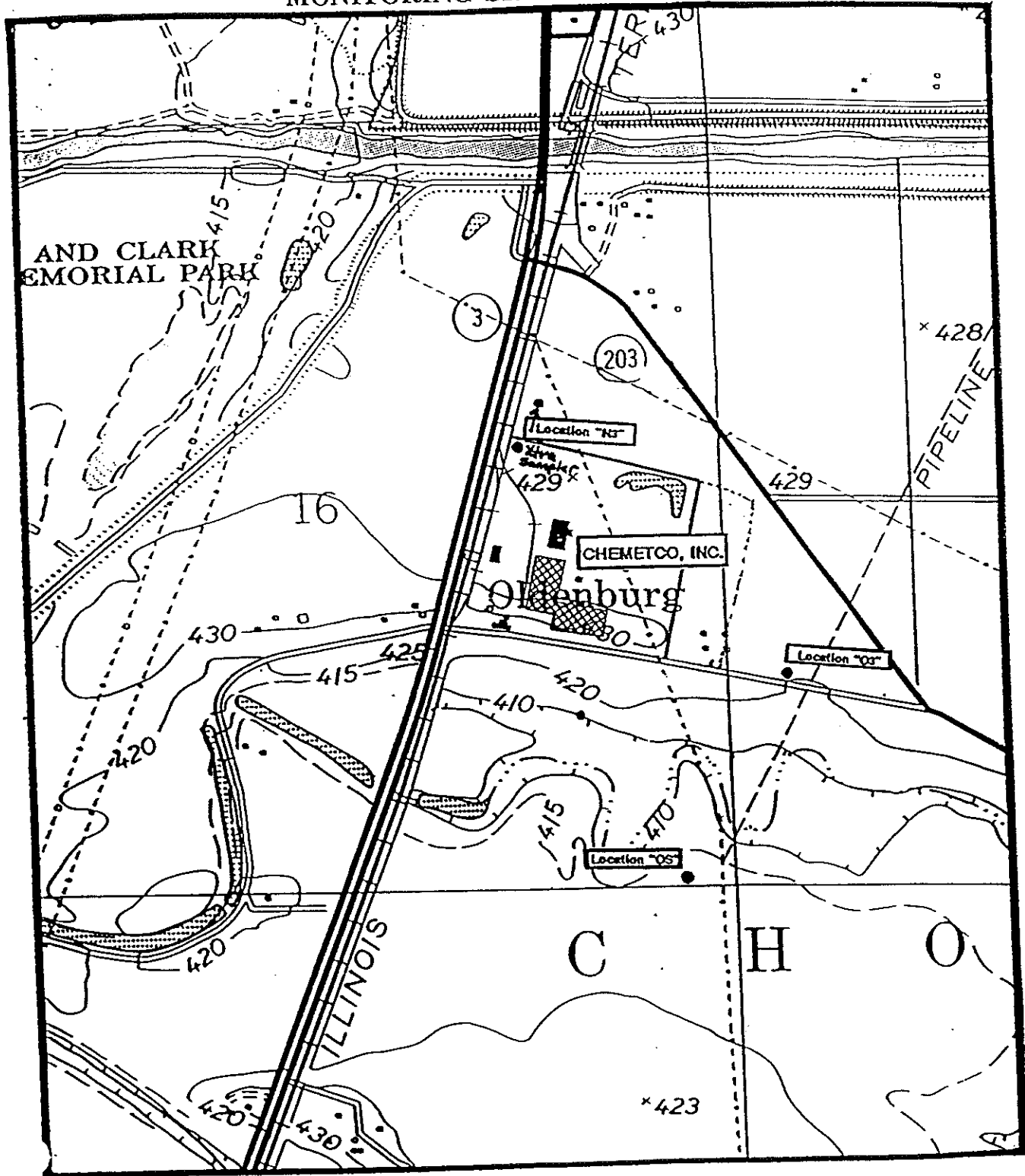
The quarter started out with several problems that were thought to be a timer problem. It was later discovered that many of the timing problems could be attributed to the training of a new individual. Several reruns were executed to try and makeup for these events. Two upset conditions were experienced during the sampling quarter. The first condition occurred on April 19, 2001. The cooling water to the snorkel for the #3 furnace shut down in the middle of a charge which caused the furnace to blow a hole in the snorkel that caused compartments 2, 3, and 4 of the #2 baghouse or the foundry roof baghouse, to shut down because of the detection of burnt bags. The furnace had to be tilted straight up away from the snorkel to allow it to be repaired. The system was overwhelmed and an upset condition was experienced. The second upset condition occurred on May 3, 2001. A flare out was experienced on the #2 furnace and the #2 baghouse (foundry roof baghouse) fan went down. In a separate incident, the primary baghouse at the slag granualtion plant went down with many bags being lost. The combination of these two events caused an upset condition. In addition, a few events showed higher than normal TSP readings. Quite a bit of plowing and field activity took place during this quarter.

**Relocation of Colocated Northern Monitors**

Chemetco believed that all data collected from N3 and N3-QC at their former location just south of the facility's northern fence was highly questionable and not valid. As evidenced by an analysis of quarterly ambient air monitoring, the monitors in their former location had been significantly impacted by nearby facility activities, structures, microclimatic influences, and/or surrounding entrained materials. The IEPA agreed with Chemetco regarding the need to relocate the northern monitors as outlined below.

Chemetco requested in a letter dated June 18, 1998, to IEPA to move the colocated ambient air monitors located in the northern portion of the facility in order to obtain samples which truly represent ambient air. The relocation was approved by IEPA in a letter dated June 24, 1998. Sampling of the ambient air monitors in the new location was initiated July 25, 1998. Additional sampling events were scheduled that same week to allow the collection of the appropriate number of samples for the third quarter 1998. Sampling proceeded as scheduled in the current location until the new monitors were in place. Chemetco is also utilizing dedicated Dickson recorders for all four official air monitors, the new colocated N3 and N3-QC, OS and O3. The aforementioned relocation of the northern ambient air monitors has allowed the collection of a more representative sample of ambient air similar to that collected by the ambient air monitors OS and O3.

FIGURE 1-1  
MONITORING SITE LOCATIONS





**TABLE 1-1**  
**STANDARD OPERATING PROCEDURES**

Determination of Total Suspended Particulates in Ambient Air Filters

Filter Conditioning

Lead Analysis in Ambient Air Filters

Operation of GMW 2310 TSP Samplers

Packaging and Shipment of Samples

## 2.0 SAMPLING DATE ACCOUNTING

Following is a list of the dates the monitors were to have run. Table 2.1 accounts the dates and events.

TABLE 2.1 - Sample Date Accounting

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
4-01-01	N3-QC	No	No	Wrong day/inadequate time
	N3	No	No	Timer problem
	OS	OK	Yes	
	O3	OK	Yes	
4-07-01	N3QC	No	No	Rerun lacked time
	N3	No	No	Rerun lacked time
	OS	OK	Yes	Plowing fields
	O3	No	No	Overtime/Plowing fields
4-09-01	N3-QC	OK	Yes	Rerun
	N3	Yes	Yes	Rerun
4-13-01	N3-QC	OK	Yes	
	N3	No	No	Overtime
	OS	OK	Yes	
	O3	OK	Yes	
4-19-01	N3-QC	No	No	Upset condition
	N3	No	No	Upset condition
	OS	No	No	Upset condition
	O3	No	No	Undertime/Upset condition
4-21-01	N3-QC	OK	Yes	Rerun
	N3	OK	Yes	
4-25-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	No	No	Motor Out
	O3	No	No	Ran over/wrong day
4-28-01	N3-QC	No	No	Undertime
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	Undertime
5-01-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
5-03-01	N3-QC	No	No	Upset condition
	N3	No	No	Upset condition
	OS	No	No	Upset condition
	O3	No	No	Upset condition
5-07-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

TABLE 2.1 - Sample Date Accounting (con't)

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
5-13-01	N3-QC	OK	Yes	Did not run
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
5-19-01	N3-QC	No	No	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
5-25-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
5-31-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
6-06-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
6-12-01	N3-QC	No	No	N3 did not run Motor out
	N3	No	No	
	OS	OK	Yes	
	O3	OK	Yes	
6-18-01	N3QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
6-24-01	N3QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
6-30-01	N3QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

### 3.0 MONITORING DATA

After the receipt from the laboratory of all data for the quarterly report, averages for each monitoring site were calculated from the pool of data. In addition, at site N3, two samplers were set up for quality assurance purposes. A standard deviation, lower and upper range was determined based on those samples and under normal circumstances can be assumed to represent accuracy for all locations.

Each day, meteorological data was noted. The weather information was obtained from either the National Weather Service, the Midwest Climate Center or the on-site weather station. These logs are shown in Figure 3.1 and quarterly averages are discussed in Section 3.2.

#### 3.1 Quarterly Averages Calculation

From the pool of acceptable data, quarterly averages were calculated by using the simple arithmetic mean determination shown in Equation 1.

$$\bar{X} = \frac{\sum X_i}{n} \quad \text{Equation 1}$$

where,

$X_i$  = individual sampling data,

$n$  = the number of valid sampling points in the quarter.

**FIGURE 3-1  
METEOROLOGICAL DATA SHEET**

**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
*4-01-01	6	247		44	81	0.02
4-02-01	5	292		45	66	0.00
4-03-01	7	225		52	68	0.30
4-04-01	6	112		54	85	0.51
4-05-01	9	67		58	70	0.03
4-06-01		135		65	79	0.00
*4-07-01	13	180		72	77	0.00
4-08-01	13	202		76	44	0.00
4-09-01	12	202		78	36	0.00
4-10-01	10	135		81	55	0.30
4-11-01	12	90		75	74	2.30
4-12-01	18	135		69	74	0.10
*4-13-01	13	225		65	56	0.00
4-14-01	9	202		63	48	0.00
4-15-01	12	135		67	50	0.00
4-16-01	9	90		65	60	0.40
4-17-01	12	157		53	50	0.02
4-18-01	11	315		46	39	0.00
*4-19-01	8	247		50	44	0.00
4-20-01	16	225		59	40	0.00
4-21-01	17	247		66	56	0.00
4-22-01	11	202		70	71	0.10
4-23-01	11	180		73	56	0.00
4-24-01	15	247		64	50	0.10
*4-25-01	10	157		54	48	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind		Temperature (F)	Relative Humidity %	Precipitation
		Direction	Sigma			
4-26-01	5	45		59	40	0.00
4-27-01	5	135		69	35	0.00
4-28-01	4	225		75	39	0.00
4-29-01	8	180		72	18	0.00
4-30-01	12	112		73	34	0.00
*5-01-01	5	164		75	47	0.20
5-02-01	7	141		74	48	0.00
5-03-01	5	146		75	43	0.00
5-04-01	9	202		77	45	0.00
5-05-01	9	202		79	44	0.00
5-06-01	10	180		73	59	0.00
*5-07-01	9	135		68	78	0.30
5-08-01	7	67		65	66	0.02
5-09-01	5	90		65	39	0.00
5-10-01	10	72		72	36	0.00
5-11-01	10	79		79	41	0.00
5-12-01	5	75		75	57	0.00
*5-13-01	5	202		68	55	0.00
5-14-01	7	90		66	44	0.00
5-15-01	7	157		72	52	0.00
5-16-01	7	225		81	56	0.00
5-17-01	7	225		84	56	0.00
5-18-01	1	179		73	76	1.90
*5-19-01	2	273		74	66	0.50

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

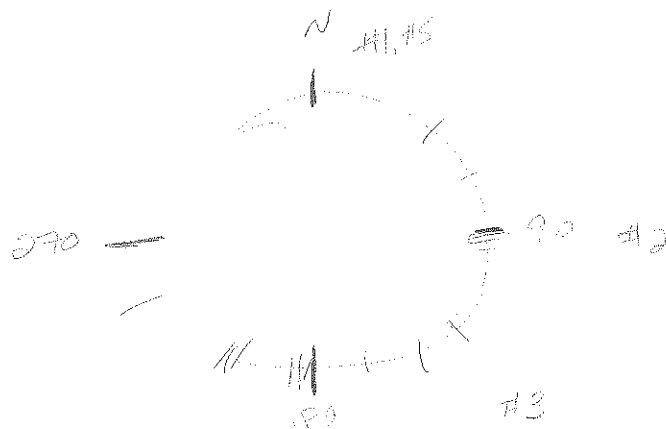
Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
5-20-01	4	149		72	73	0.06
5-21-01	6	207		65	69	0.19
5-22-01	4	231		59	54	0.08
5-23-01	5	198		59	60	0.02
5-24-01	3	223		54	63	0.01
*5-25-01	4	209		53	76	0.02
5-26-01	6	219		62	63	0.02
5-27-01	8	247		52	85	0.10
5-28-01	6	157		62	67	0.01
5-29-01	7	45		66	58	0.00
5-30-01	9	67		70	67	0.02
*5-31-01	12	90		69	46	1.80
6-01-01	9	360		47	62	1.90
6-02-01	13	247		66	40	0.20
6-03-01	6	270		66	60	0.00
6-04-01	3	327		61	83	2.20
6-05-01	4	152		73	73	0.50
*6-06-01	2	245		75	71	0.20
6-07-01	1	244		76	66	0.20
6-08-01	2	123		73	62	0.00
6-09-01	1	229		74	58	0.00
6-10-01	3	169		76	60	0.00
6-11-01	2	187		83	57	0.00
*6-12-01	3	157		84	56	0.00
6-13-01	6	138		83	55	0.00

\* Denotes Air Sampling Date

**FIGURE 3-1 (cont.)**  
**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
6-14-01	7	143		84	56	0.00
6-15-01	3	251		76	61	0.52
6-16-01	3	205		77	52	0.00
6-17-01	2	181		81	48	0.00
*6-18-01	4	160		84	43	0.00
6-19-01	3	217		82	55	0.00
6-20-01	8	90		82	57	0.00
6-21-01	8	45		74	38	1.50
6-22-01	8	67		67	81	0.70
6-23-01	8	180		66	74	0.00
*6-24-01	5	202		71	57	0.00
6-25-01	6	135		75	53	0.00
6-26-01	8	135		79	46	0.00
6-27-01	10	90		80	41	0.00
6-28-01	9	90		75	45	0.00
6-29-01	6	135		79	73	0.00
6-30-01	7	180		77	65	0.00

\* Denotes Air Sampling Date





### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

**TABLE 3.1 - Sampler Location N3**

DATE	FILTER NO	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
4-01-01	6048556	Timer Problem	-----
4-07-01	6048566	Undertime	-----
4-09-01	6048571	1.49 (Rerun)	106.72
4-13-01	6048575	Overtime	-----
4-19-01	6048579	Upset condition	-----
4-21-01	6048588	0.53	120.50
4-25-01	6048589	1.82	122.84
4-28-01	6048595	0.00	66.04
5-01-01	6048600	4.95	163.64
5-03-01	6048603	Upset condition	-----
5-07-01	6048610	0.35	37.51
5-13-01	6048616	0.50	46.26
5-19-01	6048687	0.00	43.70
5-25-01	6048696	0.00	15.67
5-31-01	6048699	0.31	48.93
6-06-01	6048738	0.0	29.55
6-12-01	6048743	Motor Out	-----
6-18-01	6048701	3.63	159.45
6-24-01	6048704	0.54	40.29
6-30-01	6048710	1.49	17.12
		=====	=====
	AVERAGE	1.12	76.71

TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
4-01-01	6048559	0.10	20.35
4-07-01	6048563	0.00 (Plowing field)	149.93
4-13-01	6048572	0.65	42.50
4-19-01	6048577	Upset condition	-----
4-25-01	6048586	Motor out	-----
4-28-01	6048592	0.00	60.54
5-01-01	6048599	0.00	99.82
5-03-01	6048606	Upset condition	-----
5-07-01	6048609	0.24	26.55
5-13-01	6048615	0.00	33.61
5-19-01	6048688	2.03	51.76
5-25-01	6048694	0.00	8.36
5-31-01	6048732	0.00	22.18
6-06-01	6048739	0.46	17.31
6-12-01	6048746	0.23	239.39
6-18-01	6048749	0.00	64.72
6-24-01	6048703	0.00	28.59
6-30-01	6048708	0.13	35.83
		=====	=====
	AVERAGE	0.26	59.90

TABLE 3.3 - Sampler Location O3

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
4-01-01	6048560	1.72	32.22
4-07-01	6048565	Overtime	-----
4-13-01	6048573	1.72	56.86
4-19-01	6048578	Undertime/upset condition	-----
4-25-01	6048585	Ran over/wrong day	-----
4-28-01	6048593	Undertime	-----
5-01-01	6048598	0.02	112.65
5-03-01	6048605	Upset condition	-----
5-07-01	6048608	3.12	80.42
5-13-01	6048618	0.00	38.61
5-19-01	6048689	0.00	48.49
5-25-01	6048693	0.00	10.05
5-31-01	6048733	0.97	27.53
6-06-01	6048739	0.23	44.47
6-12-01	6048745	5.59	190.71
6-18-01	6048750	0.00	72.13
6-24-01	6048719	0.00	28.85
6-30-01	6048709	0.13	48.87
		=====	=====
	AVERAGE	1.04	56.56

TABLE 3.4 - Filter Blank

DATE	FILTER NO.	LEAD (ug/filter)	TSP* (ug/filter)
4-01-01	6048562	6	4600
4-07-01	6048568	6	200
4-13-01	6048574	58	-1500
4-19-01	6048583	6	-1500
4-25-01	6048584	6	-1000
4-28-01	6048597	6	-900
5-01-01	6048602	6	3500
5-03-01	Not enough filters		
5-07-01	6048613	6	1200
5-13-01	6048620	6	-1700
5-19-01	6048692	6	600
5-25-01	6048698	6	-900
5-31-01	6048734	6	-1300
6-06-01	6048741	6	-1600
6-12-01	6048744	6	-3600
6-18-01	6048707	6	-3400
6-24-01	6048713	6	-5100
6-30-01	6048715	6	1000
		=====	=====
	AVERAGE	9.06	-670.59

\*TSP - Total Suspended Particulate

### 3.3 Instrument Precision Calculation

The estimates of precision for ambient air quality measurements from the TSP method are calculated from results obtained from the collection of two samplers at one sampling site, N3. The calculated precision from this one sampling site is considered indicative of the precision at all sampling sites for the TSP method.

Using the paired measurements for the official sampler, labeled "N3" and the secondary sampler, labeled "N3-QC," the precision was calculated from the following equations. These numbers are reported on the Data Assessment Report shown in Figure 3-2.

#### Percentage Difference, $d_i$

$$d_i = \frac{Y_i - X_i}{X_i} \times 100\%$$

where:  $Y_i$  = the concentration TSP measured by the secondary sampler; and  
 $X_i$  = the concentration TSP measured by the official sampler.

#### Average Percentage Difference, $d_j$

$$d_j = \frac{\sum d_i}{n}$$

where:  $n$  = the number of comparisons.

#### Standard Deviation, $S_j$

$$S_j = \sqrt{\frac{\sum (d_i)^2 - n(d_j)^2}{n - 1}}$$

#### 96% Probability Limits

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2}$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2}$$

**FIGURE 3-2  
DATA ASSESSMENT REPORT**

**Date:** July 30, 2001

**Auditor:** Heather Young

---

**Allocated Samplers**

$d_i = 9.48\%$

$d_j = 2.35\%$

$S_j = 8.24\%$

**Upper Limit = 10.43%**

**Lower Limit = -5.73%**

**Range = 70.98 to 87.14**

---

**Flow Rate Percentage Differences:**

**Sampler #1:** (See Sect. 3-4)

**Sampler #2:** (See Sect. 3-4)

**Sampler #3:** (See Sect. 3-4)

**Sampler #4:** (See Sect. 3-4)

### **3.4 Single Instrument Accuracy**

Estimates of accuracy for ambient air quality measurements from the TSP method are calculated from the results of independent audits. Once each sampling quarter, the flow rate of each high-volume sampler is audited.

Jim Henry with the IEPA Collinsville Field Office audited the sampler motors. Results of the audit were forwarded to Chemetco via email and are on record at the facility.

### **3.5 Documentation**

For each of the sampling episodes, data packages have been assembled to facilitate the retrieval of necessary data to perform and check calculations, assumptions and determinations and to generate accurate reports. These packages are maintained in a central project file at Chemetco.

Data forms are attached with backup and confirmatory information in Appendices A through C. They include:

- Filter Conditioning and TSP Calculation Logsheets;
- Calculation pages; and,
- Laboratory Analyses Report Sheet.



## **APPENDIX A**

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

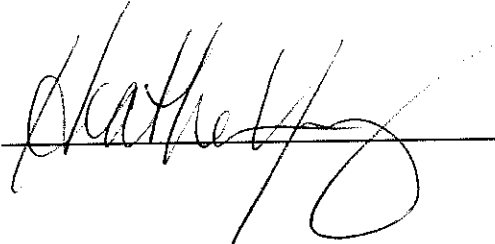
**Project Number:** 02QTR1

**Purpose:** Sampler Averages

**Total Number of Pages:** 6 (including this one)

**Date:** July 30, 2001

**Originator's Signature:** \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Kathleen", is written over a horizontal line.

# 2001 2ND QUARTER AVERAGE CALCULATION

## LOCATION N3-QC

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
04/01/01	6048557*	37924.6	37507.9	416.7	45.6	570	1356	67800	2.38	118.94	Wrong day, inadequate time
04/07/01	6048567*	38040.1	37929.6	110.5	46.4						Lacked time
04/09/01	6048571	39463	38041.9	1421.1	44.4	1893	2824	196000	1.49	103.54	Rerun
04/13/01	6048576	40904.3	39464.1	1440.2	43.2	1866	1262	211700	0.68	113.42	
04/19/01	6048581**	42345.6	40905.7	1439.9	43.8	1892	20084	444300	10.62	234.83	Upset Condition
04/21/01	6048587	43787.3	42347.4	1439.9	46.4	2004	6804	223700	3.39	111.61	Rerun
04/25/01	6048590	45228.4	43788.5	1439.9	43.2	1866	3555	257100	1.91	137.77	
04/28/01	6048596*	45879.1	45229.9	649.2	43.8	853	198	62100	0.23	72.80	Undertime
05/01/01	6048601	47320.8	45880.8	1440	44.4	1918	9265	340600	4.83	177.57	
05/03/01	6048604***	48762.1	47322	1440.1	44.4	1918	17830	429500	9.30	223.93	Upset Condition
05/07/01	6048612	50203.5	48763.4	1440.1	44.4	1918	903	80200	0.47	41.81	
05/13/01	6048617	51644.8	50204.7	1440.1	44.4	1918	1201	93100	0.63	48.53	Did not run
05/19/01	6048686*										
05/25/01	6048686	53086.4	51646.3	1440.1	44.4	1918	6	31300	0.00	16.32	
05/31/01	6048695	54527.8	53087.8	1440	43.8	1892	727	102800	0.38	54.33	
06/06/01	6048737	55969.6	54529.2	1440.4	44.4	1918	193	54100	0.10	28.21	
06/12/01	6048742*	57411.1	55971	1440.1	3.7						
06/18/01	6048700	58852.8	57412.8	1440	46	1987	6757	284000	3.40	142.91	
06/24/01	6048705	60295.5	58854.7	1440.8	43.8	1893	1175	87400	0.62	46.16	
06/30/01	6048711	61736.4	60296.4	1440	43.8	1892	2975	131700	1.57	69.60	
AVERAGE										1.50	83.98

\*Not included in average due to reason noted

\*\*Cooling water to the snorkel for the #3 furnace shut down in the middle of a charge which caused the furnace to blow a hole in the snorkel caused compartments 2, 3, and 4 of #2 baghouse (foundry baghouse) to shut down because burnt bags were detected.

\*\*\*Flare out in #2 furnace and the baghouse fan went down on the roof baghouse. In addition, The primary baghouse at slag granulation went down with many bags being lost.

2001 2ND QUARTER AVERAGE CALCULATION

LOCATION N3

DATE	FILTER NO	FINISH	TIME	START	TIME	ELAPSED	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
04/01/01	6048556*	1835		0	1835	46.7	2571	3499	1.36	89500	34.81	34.81
04/07/01	6048566*	617		0	617	44.4	822	3499	4.26	89500	108.90	108.90
04/09/01	6048571	1421		0	1421	44.4	1893	2824	1.49	202000	106.72	106.72
04/13/01	6048575*	2770		0	2770	46.7	3881	369	0.10	52000	13.40	13.40
04/19/01	6048579**	1405		0	1405	46	1939	22130	11.41	436700	225.23	225.23
04/21/01	6048588	1412		0	1412	46	1949	1036	0.53	234800	120.50	120.50
04/25/01	6048589	1414		0	1414	46	1951	3555	1.82	239700	122.84	122.84
04/28/01	6048595	1415		0	1415	45.3	1923	6	0.00	127000	66.04	66.04
05/01/01	6048600	1415		0	1415	45.3	2016	9975	4.95	329900	163.64	163.64
05/03/01	6048603***	1415		0	1415	46	1953	17830	9.13	427500	218.93	218.93
05/07/01	6048610	1414		0	1414	46	1951	679	0.35	73200	37.51	37.51
05/13/01	6048616	1414		0	1414	45.3	1922	967	0.50	88900	46.26	46.26
05/19/01	6048687	1413		0	1413	46.7	1980	6	0.00	86500	43.70	43.70
05/25/01	6048696	1415		0	1415	46	1953	6	0.00	30600	15.67	15.67
05/31/01	6048699	1410		0	1410	46	1946	599	0.31	95200	48.93	48.93
06/06/01	6048738	1415		0	1415	46	1953	58	0.03	57700	29.55	29.55
06/12/01	6048743*											Motor out
06/18/01	6048701	1413		0	1413	47.3	2005	7279	3.63	319700	159.45	159.45
06/24/01	6048704	1414		0	1414	45.4	1926	1042	0.54	77600	40.29	40.29
06/30/01	6048710	1416		0	1416	44.8	1903	2839	1.49	138500	72.78	72.78
=====											AVERAGE 1.12	76.71

\*Not included in average due to reason noted

\*\*Cooling water to the snorkel for the #3 furnace shut down in the middle of a charge which caused the furnace to blow a hole in the snorkel caused compartments 2, 3, and 4 of #2 baghouse (foundry baghouse) to shut down because burnt bags were detected.

\*\*\*Flare out in #2 furnace and the baghouse fan went down on the roof baghouse. In addition, The primary baghouse at slag granulation went down with many bags being lost.

2.80 d 11-16

2001 2ND QUARTER AVERAGE CALCULATION

LOCATION OS

DATE	FILTER	NOFINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
04/01/01	6048559	1440	0	1440	44.6	1927	186	39200	0.10	20.35
04/07/01	6048563	1440	0	1440	45.3	1957	6	293400	0.00	149.93
04/13/01	6048572	1440	0	1440	44.6	1927	1262	81900	0.65	42.50
04/19/01	6048577**	1440	0	1440	43.9	1896	6	176100	0.00	92.86
04/25/01	6048586*	1440	0	1440						
04/28/01	6048592	1440	0	1440	44.2	1909	6	115600	0.00	60.54
05/01/01	6048599	1440	0	1440	42.3	1827	6	182400	0.00	99.82
05/03/01	6048606***	1440	0	1440	43.6	1884	6	135200	0.00	71.78
05/07/01	6048609	1440	0	1440	43.6	1884	455	50000	0.24	26.55
05/13/01	6048615	1440	0	1440	43.6	1884	6	63300	0.00	33.61
05/19/01	6048688	1440	0	1440	43.6	1884	3815	97500	2.03	51.76
05/25/01	6048694	1440	0	1440	42.9	1853	6	15500	0.00	8.36
05/31/01	6048732	1440	0	1440	42.9	1853	6	41100	0.00	22.18
06/06/01	6048739	1440	0	1440	43.6	1884	866	32600	0.46	17.31
06/12/01	6048746	1440	0	1440	43.6	1884	437	450900	0.23	239.39
06/18/01	6048749	1440	0	1440	43.6	1884	6	121900	0.00	64.72
06/24/01	6048703	1440	0	1440	43.6	1884	6	48200	0.00	25.59
06/30/01	6048708	1440	0	1440	43.6	1884	248	67500	0.13	35.83
=====										
AVERAGE 0.26									59.90	

\*Not included in average due to reason noted

\*\*Cooling water to the snorkel for the #3 furnace shut down in the middle of a charge which caused the furnace to blow a hole in the snorkel caused compartments 2, 3, and 4 of #2 baghouse (foundry baghouse) to shut down because burnt bags were detected.

\*\*\*Flare out in #2 furnace and the baghouse fan went down on the roof baghouse. In addition, The primary baghouse at slag granulation went down with many bags being lost.

2001 2ND QUARTER AVERAGE CALCULATION

LOCATION O3

DATE	FILTER NO	TIME NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/fttr	TSP ug/fttr	LEAD ug/m3	TSP ug/m3	
04/01/01	6048560	6639.6	5199.7	1439.9	44.9	44.9	1940	3345	62500	1.72	32.22	
04/07/01	6048565	9525	6645.2	2879.8	44.2	44.2	3819	6	462400	0.00	121.09	Overtime/plowing field
04/13/01	6048573	10966.3	9526.4	1439.9	45.6	45.6	1970	3384	112000	1.72	56.86	
04/19/01	6048578**	12314.5	10967.4	1347.1	44.9	44.9	1815	6	207200	0.00	114.19	Undertime/Upset condition
04/25/01	6048585*	14638.3	12315.8	2322.5								Ran over/wrong day
04/28/01	6048593*	15977.9	14640.8	1337.1	44.2	44.2	1909	6	93000	0.00	48.72	Undertime
05/01/01	6048598	17419.1	15979.1	1440	44.2	44.2	1909	37	215100	0.02	112.65	
05/03/01	6048605***	18864.3	17424.3	1440	44.9	44.9	1940	6	192100	0.00	99.04	Upset condition
05/07/01	6048608	20305.3	18865.2	1440.1	44.9	44.9	1940	6055	156000	3.12	80.42	
05/13/01	6048618	21746.4	20306.4	1440	45.5	45.5	1966	6	75900	0.00	38.61	
05/19/01	6048689	23187.5	21747.6	1439.9	45.5	45.5	1965	6	95300	0.00	48.49	
05/25/01	6048693	26069.9	24629.9	1440	44.9	44.9	1940	6	19500	0.00	10.05	
05/31/01	6048733	26069.9	24629.9	1440	44.9	44.9	1940	1883	53400	0.97	27.53	
06/06/01	6048739	27511	26071	1440	44.9	44.9	2017	462	89700	0.23	44.47	
06/12/01	6048745	28952.4	27512.2	1440.2	44.2	44.2	1910	10675	364200	5.59	190.71	
06/18/01	6048750	30393.4	28953.4	1440	44.9	44.9	1940	6	139900	0.00	72.13	
06/24/01	6048719	31834.9	30394.9	1440	45.5	45.5	1966	6	56700	0.00	28.85	
06/30/01	6048709	33276.2	31836.2	1440	44.9	44.9	1940	248	94800	0.13	48.87	
=====											=====	
AVERAGE 1.04											56.56	

\*Not included in average due to reason noted

\*\*Cooling water to the snorkel for the #3 furnace shut down in the middle of a charge which caused the furnace to blow a hole in the snorkel caused compartments 2, 3, and 4 of #2 baghouse (foundry baghouse) to shut down because burnt bags were detected.

\*\*\*Flare out in #2 furnace and the baghouse fan went down on the roof baghouse. In addition, The primary baghouse at slag granulation went down with many bags being lost.

2001 2ND QUARTER AVERAGE CALCULATION

LOCATION	FB	DATE	FILTER NO	LEAD ug/filter	TSP ug/filter
		04/01/01	6048562	6	4600
		04/07/01	6048568	6	200
		04/13/01	6048574	58	-1500
		04/19/01	6048583	6	-1500
		04/25/01	6048584	6	-1000
		04/28/01	6048597	6	-900
		05/01/01	6048602	6	3500
		05/03/01	Not enough filters		
		05/07/01	6048613	6	1200
		05/13/01	6048620	6	-1700
		05/19/01	6048692	6	600
		05/25/01	6048698	6	-900
		05/31/01	6048734	6	-1300
		06/06/01	6048741	6	-1600
		06/12/01	6048744	6	-3600
		06/18/01	6048707	6	-3400
		06/24/01	6048713	6	-5100
		06/30/01	6048715	6	1000
=====					
AVERAGES					9.06 -670.59

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

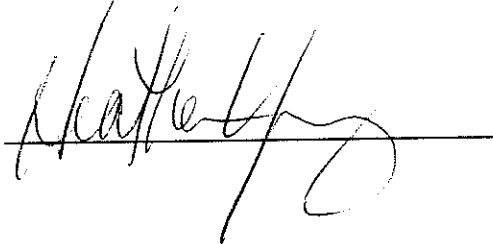
**Project Name:** Ambient Air Monitoring

**Project Number:** 02QTR1

**Purpose:** Sampler Precision Calculation

**Total Number of Pages:** 2 (including this one)

**Date:** July 30, 2001

**Originator's Signature:** 



### SAMPLER PRECISION CALCULATION (PARTICULATE)

<u>Sampling Date</u>	<u>Duplicate Sampler</u>	<u>Official Sampler</u>	<u>Difference</u>	<u>Difference (Square)</u>
4-01-01	Inadequate time	Timer problem	_____	_____
4-07-01	Lacked time	Under time	_____	_____
4-09-01	103.54	106.72	-3.18	10.11
4-13-01	113.42	Over time	_____	_____
4-19-01	Upset condition	_____	_____	_____
4-21-01	118.23	120.50	-2.27	5.15
4-25-01	137.77	122.84	14.93	222.90
4-28-01	72.80	66.04	6.76	45.70
5-01-01	177.57	163.64	13.93	194.04
5-03-01	Upset condition	_____	_____	_____
5-07-01	41.81	37.51	7.31	53.44
5-13-01	48.53	46.26	2.27	5.15
5-19-01	Did not run	43.70	_____	_____
5-25-01	16.32	15.67	0.65	0.42
5-31-01	54.33	48.93	5.40	29.16
6-06-01	28.21	29.55	-1.34	1.80
6-12-01	Did not analyze see N3	Motor out	_____	_____
6-18-01	142.91	159.45	-16.54	273.57
6-24-01	46.16	40.29	5.87	34.46
6-30-01	69.60	72.78	-3.18	10.11
			$\Sigma d_i =$ 30.61	$\Sigma d_i^2 =$ 886.01

$n=13$

$$d_j = \frac{\Sigma d_i}{n} = \frac{30.61}{13} = 2.35\%$$

$$S_j = \sqrt{\frac{\Sigma (d_i)^2 - n(d_j)^2}{n-1}} = \sqrt{\frac{886.01 - 13(5.52)}{13-1}} = \sqrt{\frac{886.01 - 72}{12}} = 8.24\%$$

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2} = 2.35\% + \frac{1.96(8.24)}{2} = 2.35 + 8.08 = 10.43\%$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2} = 2.35\% - \frac{1.96(8.24)}{2} = 2.35 - 8.08 = -5.73\%$$

Official Average Particulate: 76.71 mg/m<sup>3</sup>

Range: 70.98 to 87.14

## APPENDIX B

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 10-Apr-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048559	OS	186	39.2
G6048560	O3	3,345	62.5
G6048556	N3	304	74
G6048557	N3QC	1,356	67.8
G6048562	FB	<6	4.6

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 17-Apr-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048563	OS	<6	293.4
G6048565	O3	<6	462.4
G6048566	N3	3,499	89.5
G6048567	N3QC	467	39.6
G6048558	Extra	242	18.5
G6048568	FB	<6	0.2

Analyst: Matt Shoemaker

Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 24-Apr-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048570	N3	2,824	202
G6048571	N3QC	2,824	196

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**Analyst:**

**Matt Shoemaker**

**Title:**

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**Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 25-Apr-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048572	OS	1,262	81.9
G6048573	O3	3,384	112
G6048575	N3	369	52
G6048576	N3QC	1,262	211.7
G6048574	FB	58	-1.5

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 1-May-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048577	OS	<6	176.1
G6048578	O3	<6	207.2
G6048579	N3	22,130	436.7
G6048581	N3QC	20,084	444.3
G6048582	Extra	21,648	389.1
G6048583	FB	<6	-1.5

Analyst: Matt Shoemaker

Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 10-May-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048588	N3	7,036	234.8
G6048587	N3QC	6,804	223.7

**Analyst:**

**Matt Shoemaker**

**Title:**

**Laboratory Technician**



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 10-May-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048589	N3	3,555	239.7
G6048590	N3QC	3,555	257.1
G6048569	Extra	5,411	226.4
G6048584	FB	<6	-1

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 17-May-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048592	OS	<6	115.6
G6048593	O3	<6	93
G6048595	N3	<6	127
G6048596	N3QC	198	62.1
G6048597	FB	<6	-0.9

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 22-May-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048599	OS	<6	182.4
G6048598	O3	37	215.1
G6048600	N3	9,975	329.9
G6048601	N3QC	9,265	340.6
G6048591	Extra	7,845	343.5
G6048602	FB	<6	3.5

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 22-May-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048606	OS	<6	135.2
G6048605	O3	<6	192.1
G6048603	N3	17,830	427.5
G6048604	N3QC	17,830	429.5
G6048607	Extra	25,997	487.1

---

Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 30-May-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048609	OS	455	50
G6048608	O3	6,055	156
G6048610	N3	679	73.2
G6048612	N3QC	903	80.2
G6048611	Extra	231	61.6
G60486613	FB	<6	1.2

Analyst: Matt Shoemaker

Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 5-Jun-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048615	OS	<6	63.3
G6048618	O3	<6	75.9
G6048616	N3	967	88.9
G6048617	N3QC	1,201	93.1
G6048619	Extra	5,905	122.9
G6048620	FB	<6	-1.7

**Analyst:**

**Matt Shoemaker**

**Title:**

**Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 7-Jun-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048688	OS	3,815	97.5
G6048689	O3	<6	95.3
G6048687	N3	<6	86.5
G6048692	FB	<6	0.6

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 20-Jun-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048694	OS	<6	15.5
G6048693	O3	<6	19.5
G6048696	N3	<6	30.6
G6048686	N3QC	<6	31.3
G6048691	Extra	<6	23
G6048698	FB	<6	-0.9

Analyst: Matt Shoemaker

Title: Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 20-Jun-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048732	OS	<6	41.1
G6048733	O3	1,883	53.4
G6048699	N3	599	95.2
G6048695	N3QC	727	102.8
G6048697	Extra	1,755	89.2
G6048734	FB	<6	-1.3

Analyst: Matt Shoemaker

Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 28-Jun-01**

**Sample type: Hi-Vol Air Monitoring Program**

**Sample Identification: Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048736	OS	866	32.6
G6048739	O3	462	89.7
G6048738	N3	58	57.7
G6048737	N3QC	193	54.1
G6048740	Extra	58	49.9
G6048741	FB	<6	-1.6

**Analyst: Matt Shoemaker**

**Title: Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 3-Jul-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048746	OS	437	450.9
G6048745	O3	10,675	364.2
G6048747	Extra	44	119.3
G6048744	FB	<6	-3.6

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 9-Jul-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048749	OS	<6	121.9
G6048750	O3	<6	139.9
G6048701	N3	7,279	319.7
G6048700	N3QC	6,757	284
G6048748	Extra	7,410	295.7
G6048707	FB	<6	-3.4

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 11-Jul-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048703	OS	<6	48.2
G6048719	O3	<6	56.7
G6048704	N3	1,042	77.6
G6048705	N3QC	1,175	87.4
G6048706	Extra	2,508	104.9
G6048713	FB	<6	-5.1

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Analyst: Matt Shoemaker

Title: 

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Laboratory Technician

## APPENDIX C

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G6048556	3/21/01	3/23/01	4329.9	4/4/01	4/9/01	4403.9	74.0
G6048557	3/21/01	3/23/01	4289.8	4/4/01	4/9/01	4357.6	67.8
G6048558	3/21/01	3/23/01	4308.3	4/14/01	4/16/01	4326.8	18.5
G6048559	3/21/01	3/23/01	4315.5	4/14/01	4/9/01	4354.7	39.2
G6048560	3/21/01	3/23/01	4302.5	4/14/01	4/9/01	4365.1	62.5
G6048561	3/21/01	3/23/01	4286.9	3/29/01	4/3/01	4295.3	8.4
G6048562	3/21/01	3/23/01	4314.5	4/4/01	4/9/01	4319.1	4.6
G6048563	3/21/01	3/23/01	4296.3	4/14/01	4/16/01	4589.7	293.4
G6048564							
G6048565	3/21/01	3/23/01	4308.2	4/14/01	4/16/01	4770.6	462.4
G6048566	3/21/01	3/23/01	4305.0	4/14/01	4/16/01	4394.5	89.5
G6048567	3/21/01	3/23/01	4282.9	4/14/01	4/16/01	4322.5	39.6
G6048568	3/21/01	3/23/01	4297.5	4/14/01	4/16/01	4297.7	0.2
G6048569	3/21/01	3/23/01	4292.3	5/04/01	5/08/01	4518.7	226.4
G6048570	3/21/01	3/23/01	4424.5	4/19/01	4/23/01	4626.5	202
G6048571	3/21/01	3/23/01	4434.5	4/19/01	4/23/01	4630.5	196

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G6048572	3/21/01	3/23/01	4426.2	4/20/01	4/24/01	4508.1	81.9
G6048573	3/21/01	3/23/01	4415.5	4/20/01	4/24/01	4527.5	112
G6048574	3/21/01	3/23/01	4433.1	4/20/01	4/24/01	4431.6	-1.5
G6048575	4/9/01	4/11/01	4401.2	4/20/01	4/24/01	4453.2	52
G6048576	4/9/01	4/11/01	4421.2	4/20/01	4/24/01	4632.9	211.7
G6048577	4/9/01	4/11/01	4405.8	4/23/01	4/30/01	4581.9	176.1
G6048578	4/9/01	4/11/01	4402.2	4/23/01	4/30/01	4609.4	207.2
G6048579	4/9/01	4/11/01	4428.4	4/23/01	4/30/01	4865.1	436.7
G6048580							
G6048581	4/9/01	4/11/01	4401.8	4/23/01	4/30/01	4846.1	444.3
G6048582	4/9/01	4/11/01	4390.8	4/23/01	4/30/01	4779.9	389.1
G6048583	4/9/01	4/11/01	4381.2	4/23/01	4/30/01	4379.7	-1.5
G6048584	4/9/01	4/11/01	4361.5	5/04/01	5/08/01	4360.5	-1.0
G6048585	4/9/01	4/11/01	4350.6				
G6048586	4/9/01	4/11/01	4363.5				
G6048587	4/9/01	4/11/01	4358.7	5/04/01	5/08/01	4582.4	223.7



Chemetco Environmental Management  
Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6048588	4/9/01	4/11/01	4350.1	5/04/01	5/08/01	4584.9	234.8
G6048589	4/9/01	4/11/01	4369.0	5/04/01	5/08/01	4608.7	239.7
G6048590	4/9/01	4/11/01	4386.8	5/04/01	5/08/01	4643.9	257.1
G6048591	4/9/01	4/11/01	4363.2	5/07/01	5/18/01	4706.7	343.5
G6048592	4/9/01	4/11/01	4362.8	5/07/01	5/15/01	4478.4	115.6
G6048593	4/9/01	4/11/01	4353.3	5/07/01	5/15/01	4446.3	93.0
G6048594							
G6048595	4/24/01	4/26/01	4354.6	5/07/01	5/15/01	4481.6	127
G6048596	4/24/01	4/26/01	4358.9	5/07/01	5/15/01	4421.0	62.1
G6048597	4/24/01	4/26/01	4327.8	5/07/01	5/15/01	4326.9	-0.9
G6048598	4/24/01	4/26/01	4358.5	5/07/01	5/18/01	4573.6	215.1
G6048599	4/24/01	4/26/01	4351.5	5/07/01	5/18/01	4533.9	182.4
G6048600	4/24/01	4/26/01	4333.9	5/07/01	5/18/01	4663.8	329.9
G6048601	4/24/01	4/26/01	4362.8	5/07/01	5/18/01	4703.4	340.6
G6048602	4/24/01	4/26/01	4339.2	5/07/01	5/18/01	4342.7	3.5
G6048603	4/24/01	4/26/01	4347.5	5/10/01	5/21/01	475.0	427.5

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G6048604	4/24/01	4/26/01	4367.2	5/10/01	5/21/01	4796.7	429.5
G6048605	4/24/01	4/26/01	4354.9	5/10/01	5/21/01	4547.0	192.1
G6048606	4/24/01	4/26/01	4334.4	5/10/01	5/21/01	4469.6	135.2
G6048607	4/24/01	4/26/01	4319.9	5/10/01	5/21/01	4807.0	487.1
G6048608	4/24/01	4/26/01	4350.7	5/14/01	5/29/01	4506.7	156.0
G6048609	4/24/01	4/26/01	4315.9	5/14/01	5/29/01	4365.9	50.0
G6048610	4/24/01	4/26/01	4309.6	5/14/01	5/29/01	4382.8	73.2
G6048611	4/24/01	4/26/01	4295.7	5/14/01	5/29/01	4357.3	61.6
G6048612	4/24/01	4/26/01	4299.9	5/14/01	5/29/01	4380.0	80.2
G6048613	5/4/01	5/7/01	4302.9	5/14/01	5/29/01	4304.1	1.2
G6048614							
G6048615	5/4/01	5/7/01	4293.7	5/19/01	6/04/01	4357.0	63.3
G6048616	5/4/01	5/7/01	4285.9	5/19/01	6/4/01	4374.8	88.9
G6048617	5/4/01	5/7/01	4297.8	5/19/01	6/4/01	4390.9	93.1
G6048618	5/4/01	5/7/01	4302.8	5/19/01	6/4/01	4378.7	75.9
G6048619	5/4/01	5/7/01	4331.2	5/19/01	6/4/01	4454.1	122.9
G-6048620	5/4/01	5/7/01	4355.1	5/19/01	6/4/01	4353.4	-1.7

Chemtco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg		Date Out	Weight, mg	W <sub>net</sub> , mg	
G6048686	5/4/01	5/7/01	4275.8	6/2/01	6/18/01	4307.1	31.3	
G6048687	5/4/01	5/7/01	4258.9	5/29/01	6/6/01	4345.4	86.5	
G6048688	5/4/01	5/7/01	4270.5	5/29/01	6/6/01	4368.0	97.5	
G6048689	5/4/01	5/7/01	4331.0	5/29/01	6/6/01	4426.3	95.3	
G6048690	5/4/01	5/7/01	4322.8					
G6048691	5/4/01	5/7/01	4323.8	6/2/01	6/18/01	4346.8	23.0	
G6048692	5/4/01	5/7/01	4343.2	5/27/01	6/6/01	4343.8	0.6	
G6048693	5/4/01	5/7/01	4317.5	6/2/01	6/18/01	4337.0	19.5	
G6048694	5/4/01	5/7/01	4327.2	6/2/01	6/18/01	4342.7	15.5	
G6048695	5/4/01	5/7/01	4327.2	6/4/01	6/19/01	4430.0	102.8	
G6048696	5/4/01	5/7/01	4345.4	6/2/01	6/18/01	4376.0	30.6	
G6048697	5/4/01	5/7/01	4325.6	6/4/01	6/19/01	4414.8	89.2	
G6048698	5/4/01	5/7/01	4308.1	6/2/01	6/18/01	4307.2	-0.9	
G6048699	5/4/01	5/7/01	4312.5	6/4/01	6/19/01	4407.7	95.2	
G6048700	6/08/01	6/12/01	4317.8	6/23/01	7/5/01	4601.8	284.0	
G6048701	6/08/01	6/12/01	4329.9	6/23/01	7/5/01	4649.6	319.7	

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg
G6048702							
G6048703	6/8/01	6/12/01	4348.1	7/3/01	7/10/01	4396.3	48.2
G6048704			4342.2	7/3/01	7/10/01	4419.8	77.6
G6048705			4340.5	7/3/01	7/10/01	4427.9	87.4
G6048706			4345.4	7/3/01	7/10/01	4450.3	104.9
G6048707			4337.1	6/23/01	7/5/01	4333.7	-3.4
G6048708			4349.5	7/6/01	7/17/01	4417.0	67.5
G6048709			4359.0	7/6/01	7/17/01	4453.8	94.8
G6048710			4367.7	7/6/01	7/17/01	4506.2	138.5
G6048711			4347.4	7/6/01	7/17/01	4479.1	131.7
G6048712			4328.9	7/6/01	7/17/01	4485.4	156.5
G6048713			4325.3	7/3/01	7/10/01	4320.2	-5.1
G6048714							
G6048715			4280.4	7/6/01	7/17/01	4281.4	1.0
G6048716			4258.2				
G6048717	6/8/01	6/12/01	4285.6				

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6048718			4283.2				
G6048719	6/18/01	6/22/01	4259.4	7/3/01	7/10/01	4316.1	56.7
G6048720	6/22/01	6/25/01	4262.7				
G6048721	6/22/01	6/25/01	4287.9				
G6048722	6/22/01	6/25/01	4259.2				
G6048723	6/22/01	6/25/01	4231.3				
G6048724	6/22/01	6/25/01	4275.6				
G6048725	6/22/01	6/25/01	4279.0				
G6048726	6/22/01	6/25/01	4279.2				
G6048727	6/22/01	6/25/01	4238.4				
G6048728	6/22/01	6/25/01	4267.5				
G6048729	6/22/01	6/25/01	4253.6				
G6048730	6/22/01	6/25/01	4280.3				
G6048731	6/22/01	6/25/01	4282.2				
<del>G6048732</del>							
<del>G6048733</del>							

FOR NEXT

Chemetco Environmental Management  
Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg
G6048732	5-21-01	5-25-01	4249.5	6/4/01	6/19/01	4290.6	41.1
G6048733	5-21-01	5-25-01	4264.7	6/4/01	6/19/01	4318.1	53.4
G6048734	5-21-01	5-25-01	4256.4	6/4/01	6/19/01	4255.1	-1.3
G6048735							
G6048736	5-21-01	5-25-01	4260.9	6/16/01	6/27/01	4293.5	32.6
G6048737	5-21-01	5-25-01	4266.5	6/16/01	6/27/01	4320.6	54.1
G6048738	5-21-01	5-25-01	4249.3	6/16/01	6/27/01	4307.0	57.7
G6048739	5-21-01	5-25-01	4273.7	6/16/01	6/27/01	4363.4	89.7
G6048740	5-21-01	5-25-01	4249.5	6/16/01	6/27/01	4299.4	49.9
G6048741	5-21-01	5-25-01	4258.1	6/16/01	6/27/01	4256.5	-1.6
G6048742	5-21-01	5-25-01	4269.7				
G6048743	5-21-01	5-25-01	4273.5				
G6048744	5-21-01	5-25-01	4269.3	6/17/01	<del>7/2/01</del>	4633.5	364.2
G6048745	5-21-01	5-25-01	4402.2	6/17/01	<del>7/2/01</del>	4553.1	150.9
G6048746	5-21-01	5-25-01	4425.8	6/17/01	7/2/01	4545.1	119.3
G6048747	5-21-01	5-25-01	4220.0	6/17/01	7/2/01	4216.4	-3.6

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G6048748	5-21-01	5-25-01	4229.8	6/23/01	7/5/01	4525.5	295.7
G6048749	5-21-01	5-25-01	4244.5	6/23/01	7/5/01	4366.4	121.9
G6048750	5-21-01	5-25-01	4237.8	6/23/01	7/5/01	4377.4	139.6
G6048751							
G6048752							
G6048753							
G6048754							
G6048755							
G6048756							
G6048757							
G6048758							
G6048759							
G6048760							
G6048761							
G6048762							
G6048763							



P.O. Box 67 • Hartford, IL 62048  
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April 27, 2001

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: First Quarter 2001 Ambient Air Monitoring Report

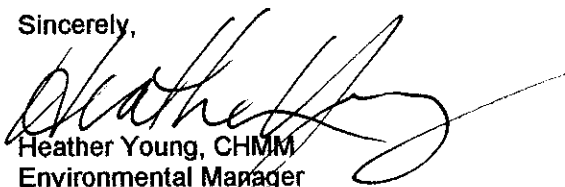
Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report January - March, 2001 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. This monitor is not included in the official approved ambient air monitoring program and is included as an attachment to this letter at the request of the Illinois EPA.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,

  
Heather Young, CHMM  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA--Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File

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MAY 01 2001

AIR ENFORCEMENT BRANCH,  
U.S. EPA, REGION 5



## LOCATION Extra

**\*Not included in average due to reason noted**

**AMBIENT AIR MONITORING**  
**QUARTERLY REPORT**  
**JANUARY - MARCH 2001**  
**FOR**  
**TOTAL PARTICULATE**  
**AND LEAD**

**CHEMETCO, INC.**  
**April 2001**



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## **1.0 INTRODUCTION**

This document presents the summary of the first calendar quarter year 2001 ambient air monitoring performed at the Chemetco, Inc. facility in Madison County.

### **1.1 Monitoring Description**

The first quarter ambient air monitoring began on January 1, 2001, and sampling for total suspended particulates and lead in the particulate was performed on a once every sixth day basis. The quarterly sampling ended on March 31, 2001. Each day, a weather log was maintained documenting wind speed, wind direction, temperature, relative humidity and precipitation. Site data is utilized unless there is problem with the computer or program. In such a case, the information is obtained from the Nation Weather Service and recorded by the security guard. Chemetco also set up an account with the Midwest Climate Center who records data at two different locations near the facility. Chemetco has purchased a new weather station. The new weather station is currently being set up.

The location of the monitoring sites was based on a modeling report done by Versar, Inc. and approved by IEPA. All locations are shown on a map in Figure 1-1.

Standard operating procedures were followed for the filter conditioning, sampling, sampler operation, analyses, etc, are shown in Table 1.1. Complete copies of the SOP's were provided in the Ambient Air Monitoring Quality Assurance/Quality Control Plan.

### **1.2 Monitoring Report**

The following pages contain the results of the first quarter monitoring. Section 2 contains an accounting of all the test dates and reasons for eliminating data from certain test dates. Section 3 contains the quarterly averages, the quality assurance data and meteorological data. The Appendices include copies of the Filter Conditioning Logsheets with total suspended particulate calculation, the laboratory analysis, and the calculation worksheets.

Several problems were encountered this quarter. Several days either lacked time, ran on wrong days, or ran over time due to problems with timers, motors, and misc. power failures. There was an upset condition associated with a malfunction of the #2 baghouse (1/7). Monitors were immediately reset and a makeup day was run (1/9). In addition, a high wind day was experienced on 2/24/01. A one hour period experienced an average wind speed of over 25 mph.

### **Relocation of Colocated Northern Monitors**

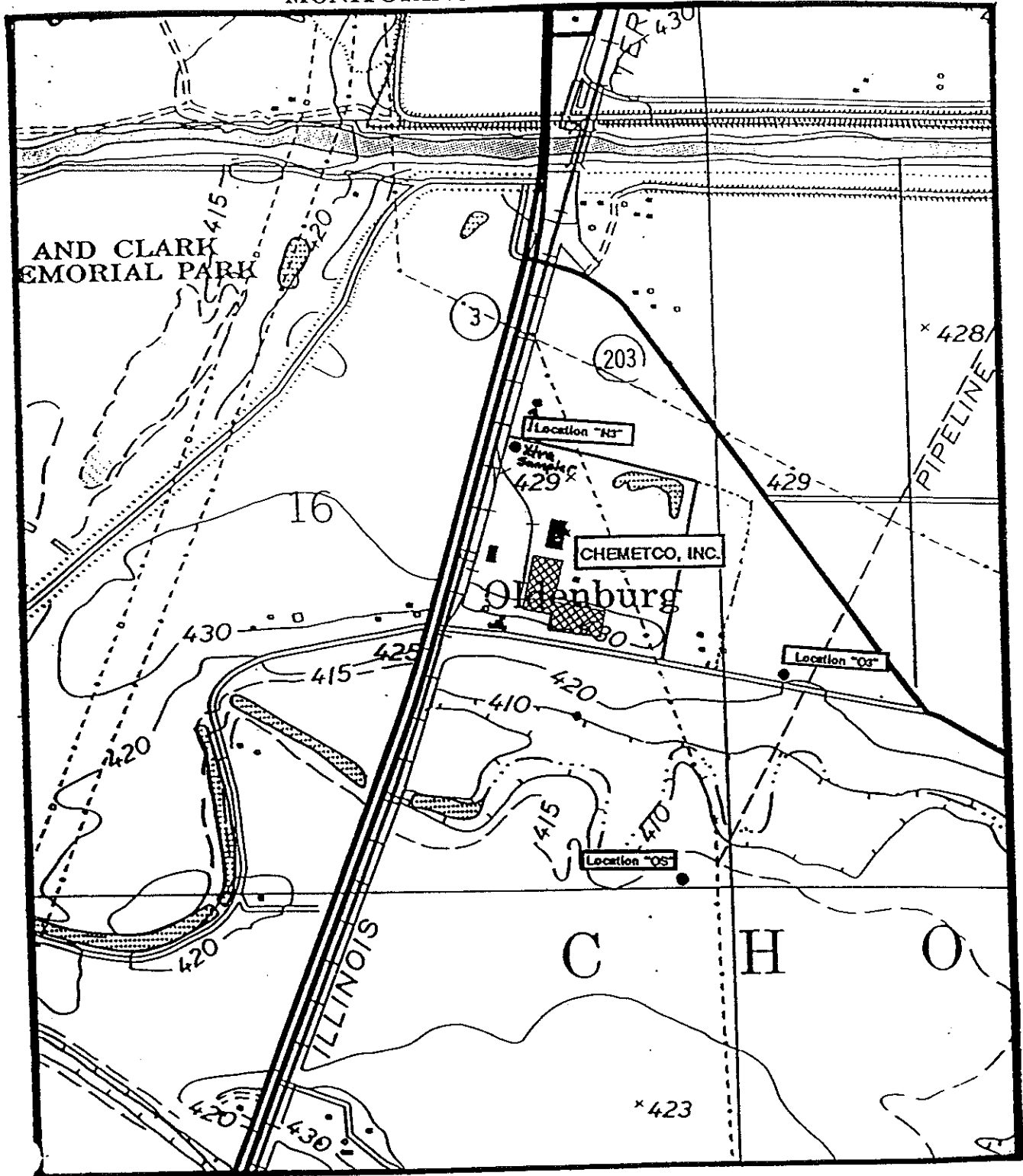
Chemetco believed that all data collected from N3 and N3-QC at their former location just south of the facility's northern fence was highly questionable and not valid. As evidenced by an analysis of quarterly ambient air monitoring, the monitors in their former location had been significantly impacted by nearby facility activities, structures, microclimatic influences, and/or

surrounding entrained materials. The IEPA agreed with Chemetco regarding the need to relocate the northern monitors as outlined below.

Chemetco requested in a letter dated June 18, 1998, to IEPA to move the colocated ambient air monitors located in the northern portion of the facility in order to obtain samples which truly represent ambient air. The relocation was approved by IEPA in a letter dated June 24, 1998. Sampling of the ambient air monitors in the new location was initiated July 25, 1998. Additional sampling events were scheduled that same week to allow the collection of the appropriate number of samples for the third quarter 1998. Sampling proceeded as scheduled in the current location until the new monitors were in place. Chemetco is also utilizing dedicated Dickson recorders for all four official air monitors, the new colocated N3 and N3-QC, OS and O3. The aforementioned relocation of the northern ambient air monitors has allowed the collection of a more representative sample of ambient air similar to that collected by the ambient air monitors OS and O3.



FIGURE 1-1  
MONITORING SITE LOCATIONS



**TABLE 1-1**  
**STANDARD OPERATING PROCEDURES**

Determination of Total Suspended Particulates in Ambient Air Filters

Filter Conditioning

Lead Analysis in Ambient Air Filters

Operation of GMW 2310 TSP Samplers

Packaging and Shipment of Samples

## 2.0 SAMPLING DATE ACCOUNTING

Following is a list of the dates the monitors were to have run. Table 2.1 accounts the dates and events.

TABLE 2.1 - Sample Date Accounting

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
1-01-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	No	No	Motor Out
	O3	No	No	Motor Out
1-04-01	OS	OK	Yes	Rerun
	O3	OK	Yes	Rerun
1-07-01	N3-QC	No	No	Upset Condition/#2 Baghouse
	N3	No	No	Upset Condition/#2 Baghouse
	OS	No	No	Upset Condition/#2 Baghouse
	O3	No	No	Upset Condition/#2 Baghouse
1-09-01	N3-QC	OK	Yes	Rerun
	N3	OK	Yes	Rerun
	OS	OK	Yes	Rerun
	O3	OK	Yes	Rerun
1-13-01	N3-QC	No	No	Over time
	N3	No	No	Over time
	OS	OK	Yes	
	O3	OK	Yes	
1-20-01	N3-QC	No	No	No motor available
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
1-25-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
1-31-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	Power failure
2-06-01	N3-QC	No	No	Wrong Day
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
2-12-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
2-18-01	N3-QC	No	No	Wrong day
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

TABLE 2.1 - Sample Date Accounting (con't)

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
2-24-01	N3-QC	No	No	High Wind
	N3	No	No	High Wind
	OS	No	No	High Wind
	O3	No	No	High Wind/Lacks time
3-02-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	Over time
3-08-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	Over time
3-14-01	N3-QC	No	No	Power failure
	N3	No	No	Power failure
	OS	No	No	Power failure
	O3	No	No	Power failure
3-20-01	N3-QC	OK	Yes	
	N3	No	No	Power failure(surge protector)
	OS	OK	Yes	
	O3	OK	Yes	
3-22-01	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
3-26-00	N3QC	No	No	Lacks time
	N3	OK	Yes	
	OS	No	No	Lacks time
	O3	OK	Yes	

### 3.0 MONITORING DATA

After the receipt from the laboratory of all data for the quarterly report, averages for each monitoring site were calculated from the pool of data. In addition, at site N3, two samplers were set up for quality assurance purposes. A standard deviation, lower and upper range was determined based on those samples and under normal circumstances can be assumed to represent accuracy for all locations.

Each day, meteorological data was noted. The weather information was obtained from either the National Weather Service, the Midwest Climate Center or the on-site weather station. These logs are shown in Figure 3.1 and quarterly averages are discussed in Section 3.2.

#### 3.1 Quarterly Averages Calculation

From the pool of acceptable data, quarterly averages were calculated by using the simple arithmetic mean determination shown in Equation 1.

$$X = \frac{\sum X_i}{n} \quad \text{Equation 1}$$

where,

$X_i$  = individual sampling data,

$n$  = the number of valid sampling points in the quarter.

**FIGURE 3-1**  
**METEOROLOGICAL DATA SHEET**  
**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind		Temperature (F)	Relative Humidity %	Precipitation
		Direction	Sigma			
*1-01-01	15	315		10	70	0.00
1-02-01	8	292		7	88	0.00
1-03-01	6	247		22	70	0.00
*1-04-01	6	248		26	81	0.00
1-05-01	14	292		38	79	0.00
1-06-01	5	292		34	88	0.00
*1-07-01	5	270		31	92	0.00
1-08-01	8	315		23	85	0.00
*1-09-01	8	0		26	84	0.00
1-10-01	6	90		27	75	0.00
1-11-01	6	180		30	61	0.00
1-12-01	7	180		35	89	0.00
*1-13-01	8	157		35	86	0.08
1-14-01	13	135		41	96	0.16
1-15-01	13	180		35	72	0.05
1-16-01	8	247		33	67	0.00
1-17-01	7	315		31	72	0.00
1-18-01	6	225		31	72	0.00
1-19-01	4	315		29	69	0.00
*1-20-01	8	292		22	81	0.00
1-21-01	10	247		27	71	0.00
1-22-01	0	0		29	78	0.00
1-23-01	3	0		32	75	0.00
1-24-01	5	270		29	78	0.00
*1-25-01	6	270		24	77	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
1-26-01	10	202		32	54	0.00
1-27-01	18	247		28	75	0.20
1-28-01	15	22		32	77	0.00
1-29-01	11	112		43	69	0.05
1-30-01	11	135		39	92	0.70
*1-31-01	7	202		34	78	0.10
2-01-01	7	292		32	78	0.50
2-02-01	19	337		14	75	0.00
2-03-01	19	90		31	46	0.00
2-04-01	11	180		33	47	0.50
2-05-01	14	247		37	89	0.00
*2-06-01	12	247		44	38	0.00
2-07-01	7	112		41	67	0.00
2-08-01	9	90		59	69	0.00
2-09-01	8	157		45	73	0.50
2-10-01	19	247		23	75	0.70
2-11-01	16	0		27	66	0.00
*2-12-01	10	90		37	60	0.00
2-13-01	8	112		43	71	0.00
2-14-01	5	135		45	86	0.08
2-15-01	7	90		35	94	0.20
2-16-01	8	337		31	96	0.02
2-17-01	13	337		27	74	0.00
*2-18-01	12	0		44	57	0.00
2-19-01	9	90		42	55	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
2-20-01	9	247		42	51	0.00
2-21-01	12	337		27	53	0.00
2-22-01	12	45		28	68	0.00
2-23-01	7	180		32	83	0.00
*2-24-01	17	180		50	85	0.14
2-25-01	17	157		45	70	0.18
2-26-01	13	270		35	62	0.06
2-27-01	6	225		45	66	0.00
2-28-01	9	90		40	72	0.00
3-01-01	7	143		32	69	0.00
*3-02-01	5	135		41	57	0.10
3-03-01	4	247		41	70	0.00
3-04-01	5	0		39	80	0.00
3-05-01	9	0		33	78	0.00
3-06-01	14	315		33	56	0.00
3-07-01	11	315		39	56	0.00
*3-08-01	7	292		37	69	0.00
3-09-01	8	135		33	66	0.00
3-10-01	4	0		32	56	0.14
3-11-01	7	90		46	41	0.025
3-12-01	13	180		52	74	0.00
3-13-01	13	225		50	61	0.10

\* Denotes Air Sampling Date



FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
*3-14-01	14	292		48	54	0.00
3-15-01	13	225		51	49	0.10
3-16-01	5	112		40	46	0.57
3-17-01	11	270		36	93	0.10
3-18-01	12	225		34	85	0.02
3-19-01	4	45		41	67	0.00
*3-20-01	7	45		45	56	0.02
3-21-01	8	23		46	58	0.00
*3-22-01	7	45		47	58	0.00
3-23-01	6	157		49	69	0.10
3-24-01	7	135		37	81	0.00
3-25-01	11	157		31	58	0.02
*3-26-01	13	157		30	45	0.00
3-27-01	6	0		35	50	0.00
3-28-01	4	45		40	41	0.00
3-29-01	10	135		45	44	0.00
3-30-01	10	135		48	86	0.00
3-31-01	7	135		43	76	0.00

\* Denotes Air Sampling Date

### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

**TABLE 3.1 - Sampler Location N3**

DATE	FILTER NO	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
1-01-01	6048369	0.00	28.34
1-04-01	-----	-----	-----
1-07-01	6048392	Upset Condition	-----
1-09-01	6048400	0.46 (Rerun)	63.33
1-13-01	6048404	Ran over time	-----
1-20-01	6048383	1.47	33.39
1-25-01	6048388	0.32	105.96
1-31-01	6048430	3.26	19.65
2-06-01	6048435	0.09	40.11
2-12-01	6048440	0.37	36.08
2-18-01	6048446	0.52	56.14
2-24-01	6048455	High Wind	-----
3-02-01	6048457	9.35	25.08
3-08-01	6048466	0.05	37.75
3-14-01	-----	Power failure	-----
3-20-01	-----	Surge protector failed	-----
3-22-01	6048479	0.13 (Rerun)	48.30
3-26-01	6048481	0.00	22.21
		=====	=====
	AVERAGE	0.62	43.03

TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
1-01-01	6048367	Motor Out	-----
1-04-01	6048376	0.04 (Rerun)	57.54
1-07-01	6048379	Upset condition	-----
1-09-01	6048397	0.24 (Rerun)	53.49
1-13-01	6048405	0.00	21.49
1-20-01	6048380	0.80	30.04
1-25-01	6048387	0.13	36.23
1-31-01	6048391	0.00	13.38
2-06-01	6048433	0.79	30.15
2-12-01	6048443	0.06	31.66
2-18-01	6048447	0.01	23.30
2-24-01	6048453	High Wind	-----
3-02-01	6048460	0.37	18.86
3-08-01	6048465	1.31	46.45
3-14-01	-----	Power failure	-----
3-20-01	6048471	0.99	52.07
3-22-01	6048477	0.01 (Rerun)	36.64
3-26-01	6048488	Lack of time	-----
		=====	=====
	AVERAGE	0.37	34.72

TABLE 3.3 - Sampler Location O3

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
1-01-01	6048375	Motor Out	-----
1-04-01	6048377	0.04 (Rerun)	58.22
1-07-01	6048378	Upset Condition	-----
1-09-01	6048398	0.59 (Rerun)	57.43
1-13-01	6048406	0.00	18.61
1-20-01	6048381	1.30	33.05
1-25-01	6048386	0.58	51.98
1-31-01	6048429	Lacks time/Power failure	-----
2-06-01	6048432	0.60	27.36
2-12-01	6048442	0.12	33.76
2-18-01	6048448	0.01	24.57
2-24-01	6048454	High wind/lacks time	-----
3-02-01	6048461	Over time	-----
3-08-01	6048464	1.56	64.52
3-14-01	-----	Power failure	-----
3-20-01	6048476	0.00	25.48-
3-22-01	6048483	0.20(Rerun)	39.23
3-26-01	6048487	7.97	84.83
		=====	=====
	AVERAGE	1.08	39.93

TABLE 3.4 - Filter Blank

DATE	FILTER NO.	LEAD (ug/filter)	TSP* (ug/filter)
1-01-01	6048372	6	1200
1-04-01	-----	-----	-----
1-07-01	6048395	6	12800
1-09-01	6048402	6	4500
1-13-01	6048407	6	-1400
1-20-01	6048385	6	500
1-25-01	6048390	49	-1600
1-31-01	6048431	6	100
2-06-01	6048437	6	4900
2-12-01	6048444	145	4100
2-18-01	6048450	6	600
2-24-01	6048456	6	-3700
3-02-01	6048462	6134	-8800
3-08-01	6048469	6	-8800
3-14-01	Power failure	-----	-----
3-20-01	6048480	6	-4000
3-22-01	6048486	6	-700
3-26-01	6048561	6	8400
		=====	=====
	AVERAGE	25.38	506.25

\*TSP - Total Suspended Particulate

### 3.3 Instrument Precision Calculation

The estimates of precision for ambient air quality measurements from the TSP method are calculated from results obtained from the collection of two samplers at one sampling site, N3. The calculated precision from this one sampling site is considered indicative of the precision at all sampling sites for the TSP method.

Using the paired measurements for the official sampler, labeled "N3" and the secondary sampler, labeled "N3-QC," the precision was calculated from the following equations. These numbers are reported on the Data Assessment Report shown in Figure 3-2.

#### Percentage Difference, $d_i$

$$d_i = \frac{Y_i - X_i}{X_i} \times 100\%$$

where:  $Y_i$  = the concentration TSP measured by the secondary sampler; and  
 $X_i$  = the concentration TSP measured by the official sampler.

#### Average Percentage Difference, $d_j$

$$d_j = \frac{\sum d_i}{n}$$

where:  $n$  = the number of comparisons.

#### Standard Deviation, $S_j$

$$S_j = \sqrt{\frac{\sum (d_i)^2 - n(d_j)^2}{n - 1}}$$

#### 96% Probability Limits

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2}$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2}$$

**FIGURE 3-2  
DATA ASSESSMENT REPORT**

**Date:** April 26, 2001

**Auditor:** Heather Young

---

**Allocated Samplers**

$d_i = 13\%$

$d_j = 4\%$

$S_j = 10.4\%$

**Upper Limit = 14.20%**

**Lower Limit = -6.2%**

**Range = 36.83 to 57.23**

---

**Flow Rate Percentage Differences:**

**Sampler #1:**(See Sect. 3-4)

**Sampler #2:**(See Sect. 3-4)

**Sampler #3:**(See Sect. 3-4)

**Sampler #4:**(See Sect. 3-4)

### **3.4 Single Instrument Accuracy**

Estimates of accuracy for ambient air quality measurements from the TSP method are calculated from the results of independent audits. Once each sampling quarter, the flow rate of each high-volume sampler is audited.

Jim Henry with the IEPA Collinsville Field Office audited the sampler motors. Results of the audit were forwarded to Chemetco via email and are on record at the facility.



### **3.5 Documentation**

For each of the sampling episodes, data packages have been assembled to facilitate the retrieval of necessary data to perform and check calculations, assumptions and determinations and to generate accurate reports. These packages are maintained in a central project file at Chemetco.

Data forms are attached with backup and confirmatory information in Appendices A through C. They include:

- Filter Conditioning and TSP Calculation Logsheets;
- Calculation pages; and,
- Laboratory Analyses Report Sheet.

## **APPENDIX A**

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

**Project Number:** 01QTR1

**Purpose:** Sampler Averages

**Total Number of Pages:** 6 (including this one)

**Date:** April 26, 2001

**Originator's Signature:** 

2001 1ST QUARTER AVERAGE CALCULATION

LOCATION N3-QC

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
1/01/01	6048371	11526.2	10086.2	1440	44.3	1821	6	50200	0.00	27.57	
1/04/01											Upset Condition, #2 Baghouse
1/07/01	6048393*	12967.6	11527.6	1440	45	2020	6	49800	0.00	24.65	Rerun for 1/7
1/09/01	6048401	14400.9	12969	1431.9	45	2020	263	118700	0.13	58.76	Ran Over/Motor Out
1/13/01	6048403*	16552	14410.2	2141.8	45	2020	2383	78900	1.18	39.06	No Motor
1/20/01											
1/25/01	6048384	19435.7	17995.7	1440	45	2020	4190	202000	2.07	100.00	
1/31/01	6048427	20876.9	19437.9	1439	45	2020	66	44300	0.03	21.93	
2/06/01	6048436*	22318.2	20878.2	1440	45.6	1970	2588	85500	1.31	43.40	Ran wrong day
2/12/01	6048441	23760	22320	1440	45.6	1970	941	83000	0.48	42.13	
2/18/01	6048449*	25201.3	23761.2	1440.1	45.6	1970	7836	141100	3.98	71.62	Ran wrong day
2/24/01	6048452*	26642.5	25202.5	1440	45.6	1970	16931	123400	8.59	62.64	High Wind
3/02/01	6048459	28083.9	26643.8	1440.1	46.1	1992	6	80800	0.00	40.57	
3/08/01	6048467	29525.1	28085.1	1440	45	1944	82.3	123400	0.04	63.48	Power failure/did not analyze
3/14/01											
3/20/01	6048478	32408.5	30968.4	1440.1	45	1944	6	68100	0.00	35.03	Rerun for 3/14
3/22/01	6048482	33851	32410	1441	45.6	1971	134	96900	0.07	49.16	Wrong day/Ran over time
3/26/01	6048489*	37506	33851.6	3654.4							
=====										AVERAGE 0.31	48.74

\*Not included in average due to reason noted

2001 1ST QUARTER AVERAGE CALCULATION

LOCATION N3

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
1/01/01	6048369	1420	0	1420	47.3	2015	6	57100	0.00	28.34
1/04/01										
1/07/01	6048392*	1421	0	1421	46.7	1991	6	43500	0.00	21.85
1/09/01	6048400	1421	0	1421	47.3	2016	922	127700	0.46	63.33
1/13/01	6048404*	1906	0	1906	47.3	2705	3974	102600	1.47	37.94
1/20/01	6048383	1410	0	1410	47.3	2001	641	66800	0.32	33.39
1/25/01	6048388	1422	0	1422	46.7	1992	6504	211100	3.26	105.96
1/31/01	6048430	1420	0	1420	47.3	2015	179	39600	0.09	19.65
2/06/01	6048435	1440	0	1440	46.7	1992	732	79900	0.37	40.11
2/12/01	6048440	1424	0	1424	47.3	2021	1059	72900	0.52	36.08
2/18/01	6048446	1419	0	1419	46.7	1988	4336	111600	2.18	56.14
2/24/01	6048455*	1423	0	1423	46.7	1994	18637	131100	9.35	65.76
3/02/01	6048457	1420	0	1420	46.7	1989	109	49900	0.05	25.08
3/08/01	6048466	1420	0	1420	46.7	1989	6	75100	0.00	37.75
3/14/01										
3/20/01	6048479	1423	0	1423	45.3	1934	257	93400	0.13	48.30
3/22/01	6048481	1417	0	1417	46.7	1985	6	44100	0.00	22.21
3/26/01										
=====										
AVERAGE 0.62 43.03										

\*Not included in average due to reason noted

avg 0.35 ug = 1.29  
avg 0.35 ug 0.00 ug/ft<sup>3</sup> n = 14, avg = 1.29

Upset Condition #2 Baghouse  
Rerun for 1/7  
Over time

High Wind

Power failure/did not analyze  
surge protector/did not analyze  
Rerun for 3/14

2001 1ST QUARTER AVERAGE CALCULATION

LOCATION OS

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
1/01/01	6048367*	1440	0	1440		1957	80.1	112600	0.04	57.54	Motor out/Will Rerun
1/04/01	6048376	1440	0	1440	45.3	1957	3295	49600	1.68	25.35	Rerun for 1/1
1/07/01	6048379*	1440	0	1440	45.3	1987	483	106300	0.24	53.49	Upset Condition#2 Baghouse
1/09/01	6048397	1440	0	1440	46	1987	6	42700	0.00	21.49	Rerun for 1/7
1/13/01	6048405	1440	0	1440	46	1987	1599	59700	0.80	30.04	
1/20/01	6048380	1440	0	1440	46	1957	256	70900	0.13	36.23	
1/25/01	6048387	1440	0	1440	45.3	2017	6	27000	0.00	13.38	
1/31/01	6048391	1440	0	1440	46.7	1957	1544	59000	0.79	30.15	
2/06/01	6048433	1440	0	1440	45.3	1987	120	62900	0.06	31.66	
2/12/01	6048443	1440	0	1440	46	1957	19	45600	0.01	23.30	
2/18/01	6048447	1440	0	1440	45.3	1957	6	36900	0.00	18.86	High wind
2/24/01	6048453*	1440	0	1440	45.3	1957	723	36900	0.37	18.86	
3/02/01	6048460	1440	0	1440	45.3	1927	2523	89500	1.31	46.45	Power failure/did not analyze
3/08/01	6048465	1440	0	1440	44.6						
3/14/01						1957	1928	101900	0.99	52.07	
3/20/01	6048471	1440	0	1440	45.3	1927	10	70600	0.01	36.64	Rerun for 3/14
3/22/01	6048477	1440	0	1440	44.6	1957	550	81500	0.28	41.65	Lack of time
3/26/01	6048488*	844	0	844	45.3						
=====											
							AVERAGE 0.37			34.72	

\*Not included in average due to reason noted

2001 1ST QUARTER AVERAGE CALCULATION

LOCATION O3

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
1/01/01	6048375*	83686.1	82245.9	1440.2	45.6	1970	80.1	114700	0.04	58.22	Motor Out/Will Rerun
1/04/01	6048377	84913.9	83687.3	1226.6	44.9	1652	5220	56500	3.16	34.20	Rerun for 1/1
1/07/01	6048378*	86355.1	84915.1	1440	44.9	1940	1142	111400	0.59	57.43	Upset Condition #2 Baghouse
1/09/01	6048398	87796.3	86356.3	1440	44.9	1940	6	36100	0.00	18.61	Rerun for 1/7
1/13/01	6048406	89866.9	88427	1439.9	45.6	1970	2556	65100	1.30	33.05	
1/20/01	6048381	91308.2	89868.3	1439.9	46.9	2026	1181	105300	0.58	51.98	
1/25/01	6048386	91508.7	91309.5	199.2	45.5	2017	1196	54100	0.60	27.36	Lack of time
1/31/01	6048429*	92956.2	91510.6	1445.6	45.6	1978	237	66500	0.12	33.76	
2/06/01	6048432	94393.2	92953.2	1440	45.6	1970	19	48400	0.01	24.57	
2/12/01	6048442	95835.1	94394.9	1440.2	45.6	1970	262	106900	0.16	63.76	High Wind, Lack of time
2/18/01	6048448	97062	95836.5	1225.5	45.6	1676	4530	249300	2.09	114.78	Overtime
2/24/01	6048454*	98675.8	97063.3	1612.5	44.9	2172	3065	127100	1.56	64.52	
3/02/01	6048461*	100117	98677.4	1440	45.6	1970					Power failure/did not analyze
3/08/01	6048464										
3/14/01											
3/20/01	6048476	2313.2	873.1	1440.1	46	2017	6	51400	0.00	25.48	
3/22/01	6048483	3756	2316	1440	44.9	1940	381	76100	0.20	39.23	Rerun for 3/14
3/26/01	6048487	5197.7	3757.8	1439.9	45.6	1970	15693	167100	7.97	84.83	
=====											
AVERAGE 1.08 m <sup>3</sup> /hr 39.93											

\*Not included in average due to reason noted

add upset & wind, m<sup>3</sup>/hr, avg = 1.30

2001 1ST QUARTER AVERAGE CALCULATION

LOCATION	FB				
DATE	FILTER NO.	LEAD ug/filter	TSP ug/filter		
1/01/01	6048372	6	1200		
1/04/01					
1/07/01	6048395	6	12800		
1/09/01	6048402	6	4500		
1/13/01	6048407	6	-1400		
1/20/01	6048385	6	500		
1/25/01	6048390	49	-1600		
1/31/01	6048431	6	100		
2/06/01	6048437	6	4900		
2/12/01	6048444	145	4100		
2/18/01	6048450	6	600		
2/24/01	6048456	6	-3700		
3/02/01	6048462	134	-8800		
3/08/01	6048459	6	-8800		
3/14/01				Power failure/did not analyze	
3/20/01	6048480	6	-4000		
3/22/01	6048486	6	-700	Rerun for 3/14	
3/26/01	6048561	6	8400		
		AVERAGES:	25.38	506.25	



**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

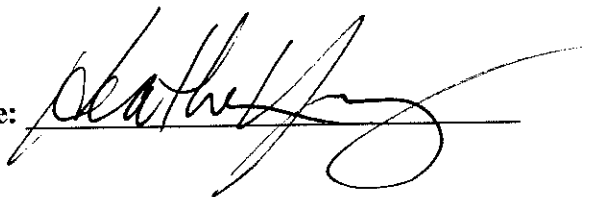
**Project Number:** 01QTR1

**Purpose:** Sampler Precision Calculation

**Total Number of Pages:** 2 (including this one)

**Date:** April 26, 2001

**Originator's Signature:**

A handwritten signature in black ink, written over a horizontal line. The signature is stylized and appears to be "K. H. H." or similar.

### SAMPLER PRECISION CALCULATION (PARTICULATE)

<u>Sampling Date</u>	<u>Duplicate Sampler</u>	<u>Official Sampler</u>	<u>Difference</u>	<u>Difference (Square)</u>
1-01-01	27.57	28.34	-0.77	0.593
1-04-01	-----	-----	-----	-----
1-07-01	Upset condition	-----	-----	-----
1-09-01	58.76	63.33	-4.57	20.885
1-13-01	Over time	21.49	-----	-----
1-20-01	No Motor	33.39	-----	-----
1-25-01	100.00	105.96	-5.96	35.522
1-31-01	21.93	19.65	2.28	5.198
2-06-01	43.40	40.11	-----	----- N3QC ran on wrong day
2-12-01	42.13	36.08	6.05	36.60
2-18-01	71.62	56.14	-----	----- N3QC ran on wrong day
2-24-01	62.64	65.76	-3.12	9.734 High Wind
3-02-01	40.57	25.08	15.49	239.94
3-08-01	63.48	37.75	25.73	662.03
3-14-01	Power failure	-----	-----	-----
3-20-01	35.03	Power failure	-----	-----
3-22-01	49.16	48.30	0.86	0.740
3-26-01	Over time	-----	-----	-----
			$\Sigma d_i =$	$\Sigma d_i^2 =$
			35.99	1011.0

$n=9$

$$d_j = \frac{\Sigma d_i}{n} = \frac{35.99}{9} = 4.0\% \quad S_j = \sqrt{\frac{\Sigma (d_i)^2 - n(d_j)^2}{n-1}} = \sqrt{\frac{1011 - 9(16)}{9-1}} = \sqrt{\frac{1011 - 144}{8}} = 10.41\%$$

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2} = 4.0\% + \frac{1.96(10.41)}{2} = 4.0 + 10.20 = 14.20\%$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2} = 4.0\% - \frac{1.96(10.41)}{2} = 4.0 - 10.20 = -6.20\%$$

Official Average Particulate: 43.03 mg/m<sup>3</sup>

Range: 36.83 to 57.23

## APPENDIX B

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 12-Jan-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048367	OS	<6	4.7
G6048375	O3	<6	4.5
G6048369	N3	<6	57.1
G6048371	N3QC	<6	50.2
G6048368	Extra	<6	5.1
G6048372	FB	<6	1.2

---

Analyst: Matt Shoemaker

---

Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 12-Jan-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048376	OS	80.1	112.6
G6048377	O3	80.1	114.7

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**Analyst:**

**Matt Shoemaker**

**Title:**

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**Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Jan-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048379	OS	3,295	49.6
G6048378	O3	5,220	56.5
G6048392	N3	<6	43.5
G6048393	N3QC	<6	49.8
G6048394	Extra	<6	39.1
G6048395	FB	<6	12.8

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Jan-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048397	OS	483	106.3
G6048398	O3	1,142	111.4
G6048400	N3	922	127.7
G6048401	N3QC	263	118.7
G6048402	FB	<6	4.5

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 25-Jan-01**

**Sample type: Hi-Vol Air Monitoring Program**

**Sample Identification: Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048405	OS	<6	42.7
G6048406	O3	<6	36.1
G6048404	N3	3,974	102.6
G6048403	N3QC	2,383	78.9
G6048399	Extra	21,240	166.8
G6048407	FB	<6	-1.4

**Analyst: Matt Shoemaker**

**Title: Laboratory Technician**



**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 30-Jan-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048380	OS	1,599	59.7
G6048381	O3	2,556	65.1
G6048383	N3	641	66.8
G6048411	Extra	402	60.6
G6048385	FB	<6	0.5

**Analyst:**

**Matt Shoemaker**

**Title:**

**Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 7-Feb-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048387	OS	256	70.9
G6048386	O3	1,181	105.3
G6048388	N3	6,504	211.1
G6048384	N3QC	4,190	202
G6048389	Extra	9,281	253.2
G6048390	FB	49	-1.6

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 12-Feb-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048391	OS	<6	27
G6048429	O3	629	5.3
G6048430	N3	179	39.6
G6048427	N3QC	66	44.3
G6048428	Extra	66	44.3
G6048431	FB	<6	0.1

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 16-Feb-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048433	OS	1,544	59
G6048432	O3	1,196	54.1
G6048435	N3	732	79.9
G6048436	N3QC	2,588	85.5
G6048434	Extra	1,196	70.8
G6048437	FB	<6	4.9

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 21-Feb-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048443	OS	120	62.9
G6048442	O3	237	66.5
G6048440	N3	1,059	72.9
G6048441	N3QC	941	83
G6048438	Extra	2,936	100.2
G6048444	FB	145	4.1

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 28-Feb-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048447	OS	19	45.6
G6048448	O3	19	48.4
G6048446	N3	4,336	111.6
G6048449	N3QC	7,836	141.1
G6048445	Extra	8,769	114.7
G6048450	FB	<6	0.6

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 7-Mar-01

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048453	OS	<6	36.9
G6048454	O3	262	106.9
G6048455	N3	18,637	131.1
G6048452	N3QC	16,931	123.4
G6048451	Extra	16,800	124.6
G6048456	FB	<6	-3.7

Analyst: Matt Shoemaker

Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 14-Mar-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048460	OS	723	36.9
G6048461	O3	4,530	249.3
G6048457	N3	109	49.9
G6048459	N3QC	355	54.9
G6048458	Extra	355	50.5
G6048462	FB	134	-8.8

**Analyst:**

**Matt Shoemaker**

**Title:**

**Laboratory Technician**



**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 20-Mar-01**

**Sample type: Hi-Vol Air Monitoring Program**

**Sample Identification: Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048465	OS	2,523	89.5
G6048464	O3	3,065	127.1
G6048466	N3	<6	75.1
G6048467	N3QC	<6	80.8
G6048468	Extra	<6	61.4
G6048469	FB	<6	-8.8

**Analyst: Matt Shoemaker**

**Title: Laboratory Technician**

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 26-Mar-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048474	OS	5,638	28.9
G6048472	N3	5,866	246.1
G6048473	N3QC	388	226.5
G6048475	FB	<6	-1.2

**Analyst:**

**Matt Shoemaker**

**Title:**

**Laboratory Technician**

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 28-Mar-01**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G6048471	OS	1,928	101.9
G6048476	O3	<6	51.4
G6048478	N3QC	<6	68.1
G6048470	Extra	<6	58.6
G6048480	FB	<6	-4

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**Analyst: Matt Shoemaker**

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**Title: Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 3-Apr-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048477	OS	10	70.6
G6048483	O3	381	76.1
G6048479	N3	257	93.4
G6048482	N3QC	134	96.9
G6048485	Extra	10	83
G6048486	FB	<6	-0.7

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 4-Apr-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048488	OS	550	81.5
G6048487	O3	15,693	167.1
G6048481	N3	<6	44.1
G6048489	N3QC	<6	126.5
G6048490	Extra	<6	14.6
G6048561	FB	<6	8.4

Analyst: Matt Shoemaker

Title: Laboratory Technician

## APPENDIX C

Chemetco Environmental Management  
Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning				
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048556	3/21/01	3/23/01	4329.9					
G6048557	3/21/01	3/23/01	4289.8					
G6048558	3/21/01	3/23/01	4308.3					
G6048559	3/21/01	3/23/01	4315.5					
G6048560	3/21/01	3/23/01	4302.5					
G6048561	3/21/01	3/23/01	4286.9	3/29/01	4/3/01	4295.3	8.4	
G6048562	3/21/01	3/23/01	4314.5					
G6048563	3/21/01	3/23/01	4296.3					
G6048564								
G6048565	3/21/01	3/23/01	4308.2					
G6048566	3/21/01	3/23/01	4305.0					
G6048567	3/21/01	3/23/01	4282.9					
G6048568	3/21/01	3/23/01	4297.5					
G6048569	3/21/01	3/23/01	4292.3					
G6048570	3/21/01	3/23/01	4424.5					
G6048571	3/21/01	3/23/01	4434.5					

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning				Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048487	3/6/01	3/9/01	4349,2	3/29/01	4/3/01	4516,3	167,1	
G6048488	3/6/01	3/9/01	4346,7	3/29/01	4/3/01	4428,2	81,5	
G6048489	3/6/01	3/9/01	4364,1	3/29/01	4/3/01	4490,6	126,5	
G6048490	3/6/01	3/9/01	4314,2	3/29/01	4/3/01	4328,8	14,6	
G6048491								
G6048492								
G6048493								
G6048494								
G6048495								
G6048496								
G6048497								
G6048498								
G6048499								
G6048500								
G6048501								
G6048502								



Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg		Date In	Date Out	Weight, mg	
G6048471	2/14/01	2/16/01	4353.9	3/23/01	3/27/01	4455.8	101.9	
G6048472	3/6/01	3/9/01	4336.0	3/21/01	3/23/01	4582.1	246.1	
G6048473	3/6/01	3/9/01	4341.3	3/21/01	3/23/01	4567.8	226.5	
G6048474	3/6/01	3/9/01	4352.9	3/21/01	3/23/01	4381.8	28.9	
G6048475	3/6/01	3/9/01	4341.8	3/21/01	3/23/01	4340.6	-1.2	
G6048476	3/6/01	3/9/01	4353.4	3/23/01	3/27/01	4404.8	51.4	
G6048477	3/6/01	3/9/01	4335.3	3/29/01	4/2/01	4405.9	70.6	
G6048478	3/6/01	3/9/01	4344.4	3/23/01	3/27/01	442.5	68.1	
G6048479	3/6/01	3/9/01	4357.9	3/20/01	3/4/2/01	4451.3	93.4	
G6048480	3/6/01	3/9/01	4341.9	3/23/01	3/27/01	4337.9	-4.0	
G6048481	3/6/01	3/9/01	4347.8	3/29/01	4/3/01	4391.6	44.1	
G6048482	3/6/01	3/9/01	4347.5	3/29/01	4/2/01	4444.4	96.9	
G6048483	3/6/01	3/9/01	4336.9	3/29/01	4/2/01	4413.0	76.1	
G6048484								
G6048485	3/6/01	3/9/01	4342.1	3/29/01	4/2/01	4425.1	83	
G6048486	3/6/01	3/9/01	4353.5	3/29/01	4/2/01	4352.8	-0.7	

## Post Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048455	2/14/01	2/16/01	4410.4	3/11/01	3/6/01	4541.5	131.1	
G6048456	2/14/01	2/16/01	4403.4	3/11/01	3/6/01	4399.7	-3.7	
G6048457	2/14/01	2/16/01	4414.9	3/09/01	3/13/01	4464.8	49.9	
G6048458	2/14/01	2/16/01	4425.6	3/9/01	3/13/01	4476.1	50.5	
G6048459	2/14/01	2/16/01	4407.4	3/9/01	3/13/01	4462.3	54.9	
G6048460	2/14/01	2/16/01	4411.1	3/9/01	3/13/01	4448.0	36.9	
G6048461	2/14/01	2/16/01	4396.9	3/9/01	3/13/01	4646.2	249.3	
G6048462	2/14/01	2/16/01	4426.3	3/9/01	3/13/01	4417.5	-8.8	
G6048463								
G6048464	2/14/01	2/16/01	4421.1	3/10/01	3/19/01	4548.2	127.1	
G6048465	2/14/01	2/16/01	4406.1	3/16/01	3/19/01	4495.6	89.5	
G6048466	2/14/01	2/16/01	4393.6	3/16/01	3/19/01	4468.7	75.1	
G6048467	2/14/01	2/16/01	4378.2	3/16/01	3/19/01	4459.0	80.8	
G6048468	2/14/01	2/16/01	4352.5	3/16/01	3/19/01	4413.9	61.4	
G6048469	2/14/01	2/16/01	4334.8	3/16/01	3/19/01	4326.0	-8.8	
G6048470	2/14/01	2/16/01	4347.7	3/23/01	3/27/01	4406.3	58.6	

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning					Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048439								
G6048440	1/30/01	2/01/01	4263.3	2/16/01	2/20/01	4336.2	72.9	
G6048441	1/30/01	2/01/01	4309.3	2/16/01	2/20/01	4392.3	83	
G6048442	1/30/01	2/01/01	4275.9	2/16/01	2/20/01	4342.4	66.5	
G6048443	1/30/01	2/01/01	4284.3	2/16/01	2/20/01	4347.2	62.9	
G6048444	1/30/01	2/01/01	4259.8	2/16/01	2/20/01	4263.9	4.1	
G6048445	1/30/01	2/01/01	4286.5	2/22/01	2/28/01	4401.2	114.7	
G6048446	1/30/01	2/01/01	4284.6	2/22/01	2/28/01	4396.2	111.6	
G6048447	1/30/01	2/01/01	4258.2	2/22/01	2/28/01	4303.8	45.6	
G6048448	1/30/01	2/01/01	4280.6	2/22/01	2/28/01	4329.0	48.4	
G6048449	1/30/01	2/01/01	4283.9	2/22/01	2/28/01	4425.0	141.1	
G6048450	1/30/01	2/01/01	4270.9	2/22/01	2/28/01	4271.5	0.6	
G6048451	1/30/01	2/01/01	4270.4	3/11/01	3/6/01	4395.0	124.6	
G6048452	1/30/01	2/01/01	4241.8	3/11/01	3/6/01	4365.2	123.4	
G6048453	2/14/01	2/16/01	4400.6	3/11/01	3/6/01	4437.5	36.9	
G6048454	2/14/01	2/16/01	4401.1	3/11/01	3/6/01	4508.0	106.9	

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6048423	11/30/00	12/04/00	4229.9				
G6048424	11/30/00	12/04/00	4243.0	12/20/00	12/22/00	4378.8	135.8
G6048425	11/30/00	12/04/00	4255.8	12/20/00	12/22/00	4409.5	153.7
G6048426							
G6048427	1/15/01	1/17/01	41272.2	2/08/01	2/12/01	4316.5	44.3
G6048428	1/15/01	1/17/01	4300.0	2/08/01	2/12/01	4344.3	44.3
G6048429	1/15/01	1/17/01	4305.9	2/08/01	2/12/01	4311.2	5.3
G6048430	1/15/01	1/17/01	4285.9	2/08/01	2/12/01	4325.5	39.6
G6048431	1/15/01	1/17/01	4292.1	2/08/01	2/12/01	4292.2	0.1
G6048432	1/15/01	1/17/01	4272.7	2/09/01	2/14/01	4326.8	54.1
G6048433	1/15/01	1/17/01	4268.1	2/09/01	2/14/01	4327.1	59.0
G6048434	1/30/01	2/01/01	41269.0	2/09/01	2/14/01	4339.8	70.8
G6048435	1/30/01	2/01/01	41229.3	2/09/01	2/14/01	4309.2	79.9
G6048436	1/30/01	2/01/01	4224.2	2/09/01	2/14/01	4309.7	85.5
G6048437	1/30/01	2/01/01	41256.8	2/09/01	2/14/01	4261.7	4.9
G6048438	1/30/01	2/01/01	41305.7	2/16/01	2/20/01	4405.9	100.2

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6048407	1/3/01	1/5/01	4343.9	1/22/01	1/24/01	4342.5	-1.4
G6048408	1/3/01	1/5/01	4330.9				
G6048409	1/3/01	1/5/01	4300.4				
G6048410	<del>1/3/01</del>	<del>1/5/01</del>					
G6048411	1/3/01	1/5/01	4258.3	1/25/01	1/29/01	4318.9	60.6
G6048412	1/30/00	12/04/00	4273.9	12/22/00	1/03/01	4334.6	60.7
G6048413	1/1/30/00	12/04/00	4266.7	12/22/00	12/28/00	4308.2	41.5
G6048414	1/1/30/00	12/04/00	4249.4	12/22/00	12/28/00	4297.0	-2.4
G6048415	1/1/30/00	12/04/00	4279.2	12/22/00	12/28/00	4334.9	55.7
G6048416	1/1/30/00	12/04/00	4263.0	12/22/00	12/28/00	4347.2	104.2
G6048417	1/1/30/00	12/04/00	4267.5	12/22/00	12/28/00	4334.5	6.7
G6048418	1/1/30/00	12/04/00	4270.3	12/22/00	12/22/00	4328.6	58.3
G6048419	1/1/30/00	12/04/00	4247.9	12/22/00	12/28/00	4433.5	185.6
G6048420	1/1/30/00	12/04/00	4287.7	12/14/00	12/18/00	4375.0	87.3
G6048421	1/1/30/00	12/04/00	4291.0	12/14/00	12/18/00	4290.9	-0.1
G6048422	1/1/30/00	12/04/00	4253.8	12/14/00	12/18/00	4356.2	102.4

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning					Post Sampling Conditioning				
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug	
G6048391	1/15/01	1/17/01	4324.7	2/8/01	2/12/01	4351.7	27.0		
G6048392	1/3/01	1/5/01	4314.4	1/15/01	1/17/01	4357.9	43.5		
G6048393	1/3/01	1/5/01	4312.6	1/15/01	1/17/01	4362.4	49.8		
G6048394	1/3/01	1/5/01	4312.7	1/15/01	1/17/01	4351.8	39.1		
G6048395	1/3/01	1/5/01	4314.6	1/15/01	1/17/01	4327.4	12.8		
G6048396	1/3/01	1/5/01	4324.5						
G6048397	1/3/01	1/5/01	4357.5	1/15/01	1/18/01	4463.8	106.3		
G6048398	1/3/01	1/5/01	4328.9	1/15/01	1/18/01	4440.3	111.4		
G6048399	1/3/01	1/5/01	4339.7	1/22/01	1/24/01	4506.5	166.8		
G6048400	1/3/01	1/5/01	4317.5	1/15/01	1/18/01	4445.2	127.7		
G6048401	1/3/01	1/5/01	4345.9	1/15/01	1/18/01	4464.6	118.7		
G6048402	1/3/01	1/5/01	4372.2	1/15/01	1/18/01	4376.7	4.5		
G6048403	1/3/01	1/5/01	4343.7	1/22/01	1/24/01	4422.6	78.9		
G6048404	1/3/01	1/5/01	4351.5	1/22/01	1/24/01	4454.1	102.6		
G6048405	1/3/01	1/5/01	4349.4	1/22/01	1/24/01	4392.1	42.7		
G6048406	1/5/01	1/5/01	4336.2	1/22/01	1/24/01	4372.3	36.1		

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6048375	12/15/00	12/18/00	4283.7	1/09/01	1/11/01	4288.2	4.5
G6048376	12/15/00	12/18/00	4276.3	1/09/01	1/11/01	4388.9	112.6
G6048377	12/15/00	12/18/00	4263.5	1/09/01	1/11/01	4378.2	114.7
G6048378	12/15/00	12/18/00	4307.2	1/15/01	1/17/01	4363.7	56.5
G6048379	12/15/00	12/18/00	4272.0	1/15/01	1/17/01	4321.6	49.6
G6048380	1/15/01	1/17/01	4274.1	1/25/01	1/29/01	4333.8	59.7
G6048381	1/15/01	1/17/01	4301.9	1/25/01	1/29/01	4367.0	65.1
G6048382	1/15/01	1/17/01	4288.2				
G6048383	1/15/01	1/17/01	4288.2	1/25/01	1/29/01	4355.0	66.8
G6048384	1/15/01	1/17/01	4297.4	2/02/01	2/06/01	4409.4	20.2
G6048385	1/15/01	1/17/01	4282.2	1/25/01	1/29/01	4282.7	0.5
G6048386	1/15/01	1/17/01	4319.4	2/02/01	2/06/01	4424.7	105.3
G6048387	1/15/01	1/17/01	4318.5	2/02/01	2/06/01	4389.4	70.9
G6048388	1/15/01	1/17/01	4334.8	2/02/01	2/06/01	4545.9	211.1
G6048389	1/15/01	1/17/01	4331.4	2/02/01	2/06/01	4584.6	253.2
G6048390	1/15/01	1/17/01	4350.3	2/02/01	2/06/01	4348.1	-1.6

# Chemetco Environmental Management Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning				Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G9019174	11/30/00	12/04/00	4393.7	12/14/00	12/15/00	4561.3	167.6	
G9019175	11/30/00	12/04/00	4418.2	12/14/00	12/15/00	4538.9	120.7	
G6048361	12/15/00	12/18/00	4270.3	12/29/00	1/03/01	4333.3	63	
G6048362	12/15/00	12/18/00	4273.6	12/29/00	1/03/01	4328.3	54.7	
G6048363	12/15/00	12/18/00	4247.0	12/29/00	1/03/01	4309.9	62.9	
G6048364	12/15/00	12/18/00	4280.8	12/29/00	1/03/01	4329.3	48.5	
G6048365	12/15/00	12/18/00	4285.6	12/29/00	1/03/01	4286.1	0.5	
G6048366	12/15/00	12/18/00	4252.0					
G6048367	12/15/00	12/18/00	4271.1	1/09/01	1/11/01	4275.8	4.7	
G6048368	12/15/00	12/18/00	4270.5	1/09/01	1/11/01	4321.5	5.1	
G6048369	12/15/00	12/18/00	4257.2	1/09/01	1/11/01	4314.3	57.1	
G6048370								
G6048371	12/15/00	12/18/00	4263.1	1/09/01	1/11/01	4313.3	50.2	
G6048372	12/15/00	12/18/00	4231.8	1/09/01	1/11/01	4233.0	1.2	
G6048373	12/15/00	12/18/00	4298.0	1/09/01	1/11/01	4283.2		
G6048374	12/15/00	12/18/00	4303.9					





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January 30, 2001

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: Fourth Quarter 2000 Ambient Air Monitoring Report

Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report October - December, 2000 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. This monitor is not included in the official approved ambient air monitoring program and is included as an attachment to this letter at the request of the Illinois EPA.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,

Heather Young, CHMM  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA--Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File

**AMBIENT AIR MONITORING**  
**QUARTERLY REPORT**  
**OCTOBER - DECEMBER 2000**  
**FOR**  
**TOTAL PARTICULATE**  
**AND LEAD**

**CHEMETCO, INC.**  
**January 2001**



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## **1.0 INTRODUCTION**

This document presents the summary of the fourth calendar quarter year 2000 ambient air monitoring performed at the Chemetco, Inc. facility in Madison County.

### **1.1 Monitoring Description**

The fourth quarter ambient air monitoring began on October 1, 2000, and sampling for total suspended particulates and lead in the particulate was performed on a once every sixth day basis. The quarterly sampling ended on December 31, 2000. Each day, a weather log was maintained documenting wind speed, wind direction, temperature, relative humidity and precipitation. Site data is utilized unless there is problem with the computer or program. In such a case, the information is obtained from the Nation Weather Service and recorded by the security guard. Chemetco also set up an account with the Midwest Climate Center who records data at two different locations near the area. Chemetco is in the process of evaluating the purchase of a new weather station. The weather station currently on site does no longer record wind speed.

The location of the monitoring sites was based on a modeling report done by Versar, Inc. and approved by IEPA. All locations are shown on a map in Figure 1-1.

Standard operating procedures were followed for the filter conditioning, sampling, sampler operation, analyses, etc, are shown in Table 1.1. Complete copies of the SOP's were provided in the Ambient Air Monitoring Quality Assurance/Quality Control Plan.

### **1.2 Monitoring Report**

The following pages contain the results of the fourth quarter monitoring. Section 2 contains an accounting of all the test dates and reasons for eliminating data from certain test dates. Section 3 contains the quarterly averages, the quality assurance data and meteorological data. The Appendices include copies of the Filter Conditioning Logsheets with total suspended particulate calculation, the laboratory analysis, and the calculation worksheets.

Several problems were encountered this quarter. Several run days were either missed, lacked time, or ran on wrong days due to numerous problems with timers and motors. The problems experienced were compounded by the weather including extreme temperatures, wind chills and snowfall. A majority of the aforementioned problems afflicted monitors N3 and N3-QC though all 4 monitors did experience difficulty at some time during the quarter. Motors were changed out on N3 and N3QC, the timer was replaced on N3QC, and a fuse blew on O3 twice.

Several higher than normal readings were obtained from the O3 monitor which is located east of the facility. Since this monitor has consistently exhibited low lead levels in the past, Chemetco had the lab rerun the filters to confirm the numbers from the 11/20/00 and 11/26/00 sampling events. This reanalysis confirmed the original. In order to isolate the potential source of the abnormal results, Chemetco contacted Jim Henry at the IEPA. Standard operating procedure is to send the IEPA a portion of the filter so that they may run analyses to confirm Chemetco results. Chemetco requested to utilize the IEPA's portion of the filter to run an assay of metals on the filter to try and

isolate the potential source of impact to the east monitor. Mr. Henry said that this was acceptable. If the baghouses were suspect (#1, #2, DIS), certain metals would be expected in higher concentrations than others in the different baghouses due to the differences in the air streams. This analysis did not indicate the #1 baghouse and the DIS did not necessarily operate on the run days. The #2 baghouse is inspected and no abnormal conditions were observed. Upon inspection of the roof from inside the foundry, a large break in the roof was discovered at the crest of the roof above the #4 furnace (south end of foundry). Due to extreme weather conditions experienced in November and December such as extreme temperature, wind chill and heavy snowfall, the contractors that repair the roof were unable to get to this area in a safe manner. The roof was temporarily covered in early January once the weather permitted. This area of the roof is very deteriorated and new struts/beams were ordered and have been received to replace this portion of the roof. The roofing and struts will have to be assembled on the ground prior to the placement because of the location (directly above #4) and the condition of the roof. Chemetco submitted a proposal to replace the entire roof to USEPA in year 2000. To date, no response has been received. Due to the circumstances discussed above, Chemetco believes this to have been an upset condition that was compounded by the weather. A review of lead values of O3 between 1996 and the present was performed, the last time O3 experienced a lead level of between 7 and 8 ug/m3 was in 1996. The lead values have consistently since 1997 been less than 1.0 ug/m3. Monitor O3 has experienced a few hits between 1.0 and 4.0 ug/m3 lead with even fewer between 4.0 and 6.0 ug/m3. Therefore, Chemetco did not include the samples dated 11/16/00, 11/20/00, and 11/26/00 in the quarterly average.

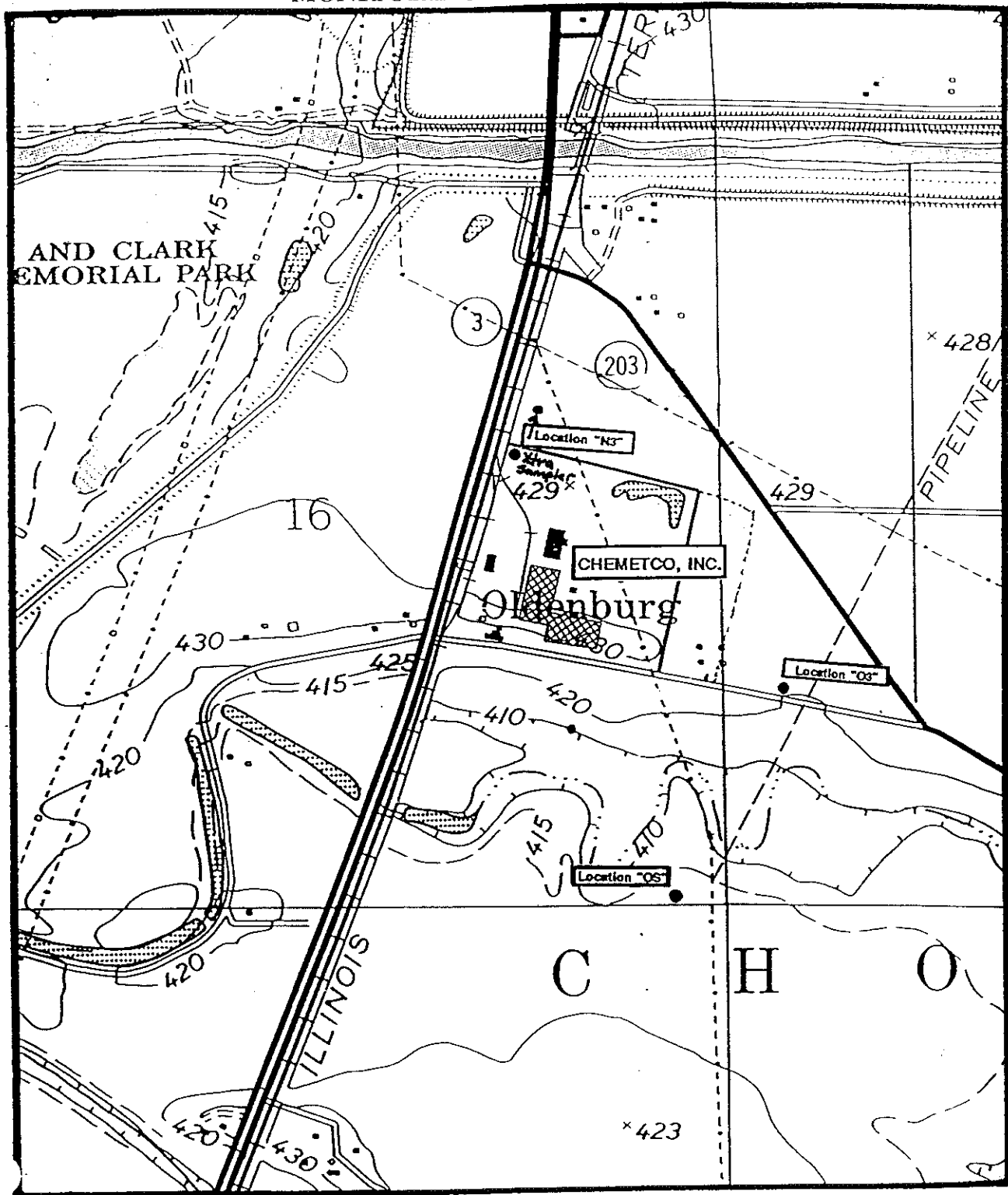
### **Relocation of Colocated Northern Monitors**

Chemetco believed that all data collected from N3 and N3-QC at their former location just south of the facility's northern fence was highly questionable and not valid. As evidenced by an analysis of quarterly ambient air monitoring, the monitors in their former location had been significantly impacted by nearby facility activities, structures, microclimatic influences, and/or surrounding entrained materials. The IEPA agreed with Chemetco regarding the need to relocate the northern monitors as outlined below.

Chemetco requested in a letter dated June 18, 1998, to IEPA to move the colocated ambient air monitors located in the northern portion of the facility in order to obtain samples which truly represent ambient air. The relocation was approved by IEPA in a letter dated June 24, 1998. Sampling of the ambient air monitors in the new location was initiated July 25, 1998. Additional sampling events were scheduled that same week to allow the collection of the appropriate number of samples for the third quarter 1998. Sampling proceeded as scheduled in the current location until the new monitors were in place. Chemetco is also utilizing dedicated Dickson recorders for all four official air monitors, the new colocated N3 and N3-QC, OS and O3. The aforementioned relocation of the northern ambient air monitors has allowed the collection of a more representative sample of ambient air similar to that collected by the ambient air monitors OS and O3.



FIGURE 1-1  
MONITORING SITE LOCATIONS



**TABLE 1-1**  
**STANDARD OPERATING PROCEDURES**

Determination of Total Suspended Particulates in Ambient Air Filters

Filter Conditioning

Lead Analysis in Ambient Air Filters

Operation of GMW 2310 TSP Samplers

Packaging and Shipment of Samples

## 2.0 SAMPLING DATE ACCOUNTING

Following is a list of the dates the monitors were to have run. Table 2.1 accounts the dates and events.

TABLE 2.1 - Sample Date Accounting

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
10-03-00	N3-QC	OK	Yes	Timer problem
	N3	No	No	
	OS	OK	Yes	
	O3	OK	Yes	
10-04-00	N3-QC	OK	Yes	Reran along w/N3 Rerun
	N3	OK	Yes	
10-09-00	N3-QC	No	No	Did not run/incorrect day
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
10-15-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
10-21-00	N3-QC	No	No	Did not run/incorrect day
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
10-27-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
11-02-00	N3-QC	No	No	Motor out Motor out Ran over/did not analyze Wrong day/did not analyze
	N3	No	No	
	OS	No	No	
	O3	No	No	
11-09-00	N3-QC	No	No	Timer problem
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
11-14-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
11-16-00	N3-QC	No	No	Timer problem
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	
11-20-00	N3-QC	OK	Yes	Upset condition, roof New timer installed
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	

TABLE 2.1 - Sample Date Accounting (con't)

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
11-26-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	Upset condition, roof
12-02-00	N3-QC	OK	Yes	Timer problem, skips Saturday
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
12-04-00	N3-QC	OK	Yes	Rerun
	N3	OK	Yes	Rerun
12-05-00	N3-QC	OK	Yes	Rerun
	N3	No	No	Lack of time
12-08-00	N3-QC	OK	Yes	
	N3	No	No	Lack of time
	OS	OK	Yes	
	O3	OK	Yes	
12-14-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
12-20-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	Lack of time
12-26-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
12-28-00	O3	No	No	Fuse blown
12-30-00	O3	No	No	Ran over, Fuse

### 3.0 MONITORING DATA

After the receipt from the laboratory of all data for the quarterly report, averages for each monitoring site were calculated from the pool of data. In addition, at site N3, two samplers were set up for quality assurance purposes. A standard deviation, lower and upper range was determined based on those samples and under normal circumstances can be assumed to represent accuracy for all locations.

Each day, meteorological data was noted. The weather information was obtained from either the National Weather Service, the Midwest Climate Center or the on-site weather station. Chemetco is currently evaluating the possible purchase of a new weather station. These logs are shown in Figure 3.1 and quarterly averages are discussed in Section 3.2.

#### 3.1 Quarterly Averages Calculation

From the pool of acceptable data, quarterly averages were calculated by using the simple arithmetic mean determination shown in Equation 1.

$$X = \frac{\sum X_i}{n} \quad \text{Equation 1}$$

where,

$X_i$  = individual sampling data,

$n$  = the number of valid sampling points in the quarter.

**FIGURE 3-1**  
**METEOROLOGICAL DATA SHEET**  
**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
10-01-00	6.0	174		69	56	0.00
10-02-00	5.0	179		72	64	0.00
*10-03-00	4.0	167		73	70	0.00
*10-04-00	9.0	13.0		63	84	0.00
10-05-00	9.0	336		58	92	1.42
10-06-00	13.0	329		48	62	0.00
10-07-00	11.0	319		40	53	0.00
10-08-00	11.0	319		41	54	0.00
*10-09-00	3.0	313		41	59	0.00
10-10-00	1.0	198		43	61	0.00
10-11-00	2.0	148		50	59	0.00
10-12-00	4.0	1143		54	58	0.00
10-13-00	5.0	165		64	62	0.00
10-14-00	5.0	210		67	69	1.42
*10-15-00	2.0	226		62	94	0.25
10-16-00	6.0	35		59	95	0.30
10-17-00	6.0	353		56	76	0.60
10-18-00	0.0	233		55	72	0.00
10-19-00	2.0	153		58	69	0.00
10-20-00	2.0	158		59	69	0.00
*10-21-00	2.0	125		61	67	0.00
10-22-00	3.0	100		61	86	0.00
10-23-00	2.0	192		68	75	0.24
10-24-00	1.0	354		68	79	0.00
10-25-00	3.0	160		67	74	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind		Temperature (F)	Relative Humidity %	Precipitation
		Direction	Sigma			
10-26-00	4.0	178		69	62	0.00
*10-27-00	1.0	209		64	79	0.00
10-28-00	5.0	32.0		55	86	0.00
10-29-00	9.0	103		55	78	0.00
10-30-00	8.0	127		61	77	0.00
10-31-00	3.0	138		63	87	0.00
11-01-00	8.0	157		61	90	0.00
*11-02-00	9.0	157		64	73	0.00
11-03-00	10.0	180		66	73	0.40
11-04-00	2.0	64		66	72	0.00
11-05-00	8.0	131		59	65	0.00
11-06-00	20.0	135		53	60	0.00
11-07-00	8.0	202		50	64	1.35
11-08-00	12.0	292		53	78	0.05
*11-09-00	7.50	157		53	85	0.01
11-10-00	11.0	157		46	91	0.80
11-11-00	10.0	202		39	83	0.10
11-12-00	4.0	135		39	84	0.00
11-13-00	6.0	225		37	84	0.55
*11-14-00	14.0	270		39	73	0.07
11-15-00	11.0	270		36	72	0.00
*11-16-00	10.0	225		35	69	0.00
11-17-00	16.0	293		35	56	0.00
11-18-00	10.0	315		36	67	0.00
11-19-00	5.0	315		33	76	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
*11-20-00	12.0	292		36	65	0.00
11-21-00	17.0	292		36	52	0.00
11-22-00	11.0	247		32	55	0.00
11-23-00	5.0	315		31	55	0.00
11-24-00	9.0	90		28	61	0.00
11-25-00	12.0	202		34	71	0.20
*11-26-00	12.0	315		38	89	0.50
11-27-00	8.0	292		40	96	0.00
11-28-00	4.0	270		40	85	0.00
11-29-00	8.0	247		57	70	0.00
11-30-00	8.0	270		35	68	0.00
12-01-00	11.0	202		37	75	0.00
*12-02-00	13.0	67		36	87	0.05
12-03-00	10.0	45		29	96	0.06
*12-04-00	5.0	223		32	75	0.00
*12-05-00	11.0	270		36	72	0.00
12-06-00	11.0	157		20	60	0.00
12-07-00	7.0	135		25	60	0.05
*12-08-00	7.0	270		33	77	0.00
12-09-00	6.0	202		33	75	0.00
12-10-00	8.0	113		30	81	0.00
12-11-00	10.0	113		39	80	0.10
12-12-00	13.0	202		25	79	0.50
12-13-00	13.0	225		13	76	0.00

\* Denotes Air Sampling Date



FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
*12-14-00	9.0	202		18	86	0.75
*12-15-00	8.0	203		19	86	0.00
12-16-00	8.0	158		25	88	0.00
12-17-00	17.0	225		18	86	0.00
12-18-00	14.0	225		22	73	0.00
12-19-00	9.0	225		13	70	0.00
*12-20-00	8.0	135		10	73	0.00
12-21-00	14.0	90		15	78	0.00
12-22-00	14.0	90		16	71	0.00
12-23-00	14.5	67		12	56	0.00
12-24-00	10.5	222		19	58	0.00
12-25-00	5.5	337		14	65	0.00
*12-26-00	5.5	45		10	69	0.00
12-27-00	5.5	90		18	82	0.00
12-28-00	4.5	67		17	81	0.00
12-29-00	6.0	112		17	69	0.10
12-30-00	10.5	247		20	76	0.00
12-31-00	16.0	315		18	82	0.00

\* Denotes Air Sampling Date

### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

**TABLE 3.1 - Sampler Location N3**

<b>DATE</b>	<b>FILTER NO</b>	<b>LEAD (ug/m<sup>3</sup>)</b>	<b>TSP* (ug/m<sup>3</sup>)</b>
10-03-00	9018891	Timer Problem	-----
10-04-00	9018915	0.00	20.63
10-09-00	9018910	0.00	43.60
10-15-00	9018905	0.00	22.69
10-21-00	9019113	0.38	71.31
10-27-00	9019131	0.06	62.54
11-02-00	9019128	Motor Out	-----
11-09-00	9019132	0.00	11.28
11-14-00	9019137	0.01	17.56
11-16-00	9019142	2.03	53.46
11-20-00	9019148	0.05	14.72
11-26-00	9019157	0.00	38.34
12-02-00	9019161	0.04	27.79
12-04-00	9019170	0.54	65.19
12-05-00	9019171	Lack of time	-----
12-08-00	9019175	Lack of time	-----
12-14-00	9019172	0.02	57.85
12-20-00	6048417	2.31	52.38
12-26-00	6048412	0.00	17.12
		=====	=====
	<b>AVERAGE</b>	<b>0.38</b>	<b>38.43</b>

TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
10-03-00	9018889	0.13	68.35
10-09-00	9019913	0.19	33.64
10-15-00	9019907	0.01	22.37
10-21-00	9019114	0.00	62.74
10-27-00	9019120	0.00	48.16
11-02-00	9019127	Ran over	-----
11-09-00	9019133	0.17	25.97
11-14-00	9019139	0.08	10.81
11-16-00	9019145	0.00	24.44
11-20-00	9019151	0.00	15.18
11-26-00	9019156	0.00	41.44
12-02-00	9019163	0.00	28.78
12-08-00	9019168	5.07	85.03
12-14-00	6048422	0.00	53.15
12-20-00	6048415	0.07	28.91
12-26-00	6048363	0.07	32.64
		=====	=====
	AVERAGE	0.39	38.77

TABLE 3.3 - Sampler Location O3

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
10/03/00	9018888	0.08	63.31
10/09/00	9018912	1.56	42.51
10/15/00	9018906	0.21	34.42
10/21/00	9019115	0.00	58.91
10/27/00	9019119	0.37	67.50
11/02/00	9019126	Wrong Day	Did not analyze
11/09/00	9019134	0.00	4.13
11/14/00	9019140	0.94	11.16
11/16/00	9019146	Upset Condition	Roof unable to repair, weather
11/20/00	9019152	Upset Condition	Roof unable to repair, weather
11/26/00	9019155	Upset Condition	Roof unable to repair, weather
12/02/00	9019162	0.04	21.12
12/08/00	9019167	0.64	54.66
12/14/00	6048420	1.71	43.88
12/15/00	6048418	0.02	29.31
12/20/00	6048413	Lack of time	-----
12/26/00	6048364	0.23	24.78
12/28/00	6048366	Fuse blown	-----
12/30/00	6048373	Ran over/Fuse	-----
		=====	=====
	AVERAGE	0.48	39.76

TABLE 3.4 - Filter Blank

DATE	FILTER NO.	LEAD (ug/filter)	TSP* (ug/filter)
10/03/00	9018887	49.2	-6400
10/09/00	9018908	6	2500
10/15/00	9019116	6	1800
10/21/00	9019111	6	-4900
10/27/00	9019123	6	-3200
11/09/00	9019135	6	-3500
11/14/00	9019141	6	-400
11/16/00	9019153	6	-2200
11/20/00	9019154	6	-6100
11/26/00	9019159	6	-1200
12/02/00	9019165	6	13100
12/08/00	9019173	6	30700
12/14/00	6048421	6	-100
12/20/00	6048414	6	-2400
12/26/00	6048365	6	500
		=====	=====
	AVERAGE	8.88	1213.33

\*TSP - Total Suspended Particulate

**TABLE 3-5**  
**ANNUAL TOTAL SUSPENDED PARTICULATE AVERAGE AND MEAN**

\*Unusual conditions were experienced in relation to the TSP values from April through mid May. Chemetco believes that the reason for the TSP values and their respective low lead values were caused by field dirt. Fields were plowed and planted in April and then replowed and replanted through mid May. Filters affected by field dirt are often tan in color rather than the gray normally observed. The lead levels associated with the high TSP numbers are very much lower than would be expected. Based on the low lead levels and color of the filters, those marked with an asterick were not counted in the annual average or geometric mean.

Date		N3	OS	O3
1/1/00		72.07	42.74	39.42
1/7/00		51.85	29.63	31.31
1/13/00		34.91	42.7	83.4
1/19/00		60.81	33.31	31.28
1/25/00		43.79	114.48	75.43
1/31/00		48.15	26.71	40.33
2/6/00		55.63	39.33	39.51
2/12/00		42.29	27.37	27.6
2/18/00		17.47	29.48	0
2/24/00		70.97	29.95	31.94
3/1/00		31.78	24.96	103.02
3/7/00		70.98	46.49	57.49
3/13/00		35.41	6.87	39.96
3/19/00		12.96	24.4	89.8
3/25/00		17.12	29.56	83.6
3/31/00		5.73	1.12	1.62
4/6/00		*216.11	103.21	*203.51
4/12/00		45.11	38.77	44.05
4/18/00		Motor out	40.54	49.67
4/24/00		52.58	33.37	22.12
4/30/00		114.22	58.44	75.54
5/6/00		105.88	89.83	43.67
5/12/00		111.49	*278.49	147.71
5/18/00		*216.72	80.74	110.54
5/24/00		59.97	48.25	103.11
5/30/00		174.32	37.73	46.74
6/5/00		33.67	77.49	92.88
6/11/00		64.49	36.13	35.05
6/17/00		30.84	27.09	25.13
6/23/00		117.87	36.49	48.61
6/27/00		17.12		
6/29/00		37.37	24.18	69.34

7/5/00			81.58		104.81		188.46
7/11/00			61.17		37.1		Power failure
7/17/00			61.65		29.74		31.9
7/23/00			25.17		19.78		44.99
7/29/00			31.67		24.13		21.64
8/4/00			27.03		22.9		22.02
8/10/00			43.08		50.55		38.14
8/16/00			65.89		61.49		63.36
8/22/00			118.2		58.58		59.18
8/28/00			83.09		52.78		45.69
9/3/00			82.72		75.15		64.11
9/9/00			100.84		11.21		40.51
9/15/00			25.36		39.15		26.72
9/21/00			Breaker blew out		32.79		31.67
9/27/00			17.12		34.77		35.97
10/3/00			Timer		68.35		63.31
10/4/00			20.63				
10/9/00			43.6		33.64		42.51
10/15/00			22.69		22.37		34.42
10/21/00			71.31		62.74		58.91
10/27/00			62.54		48.16		67.5
11/2/00			Motor		Ran over		Wrong day
11/9/00			11.28		25.97		4.13
11/14/00			17.56		10.81		11.16
11/16/00			53.46		24.44		66.1
11/20/00			14.72		15.18		95.64
11/26/00			38.34		41.44		74.56
12/2/00			27.79		28.78		21.12
12/4/00			65.19		Not run		Not run
12/5/00			68.25		Not run		Not run
12/8/00			60.17		85.03		54.66
12/14/00			57.85		53.15		43.88
12/20/00			52.38		28.91		29.31
12/26/00			17.12		32.64		24.78
	Average		55.459344		44.886333		52.478305
	Geometric Mean		44.258846		35.454812		41.667774

### 3.3 Instrument Precision Calculation

The estimates of precision for ambient air quality measurements from the TSP method are calculated from results obtained from the collection of two samplers at one sampling site, N3. The calculated precision from this one sampling site is considered indicative of the precision at all sampling sites for the TSP method.

Using the paired measurements for the official sampler, labeled "N3" and the secondary sampler, labeled "N3-QC," the precision was calculated from the following equations. These numbers are reported on the Data Assessment Report shown in Figure 3-2.

#### Percentage Difference, $d_i$

$$d_i = \frac{Y_i - X_i}{X_i} \times 100\%$$

where:  $Y_i$  = the concentration TSP measured by the secondary sampler; and  
 $X_i$  = the concentration TSP measured by the official sampler.

#### Average Percentage Difference, $d_j$

$$d_j = \frac{\sum d_i}{n}$$

where:  $n$  = the number of comparisons.

#### Standard Deviation, $S_j$

$$S_j = \frac{\sum (d_i)^2 - n(d_j)^2}{n - 1}$$

#### 96% Probability Limits

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2}$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2}$$



**FIGURE 3-2**  
**DATA ASSESSMENT REPORT**

**Date:** January 22, 2001  
**Auditor:** Heather Young

---

**Allocated Samplers**

$d_i = -83.28$   
 $d_j = -8.33\%$   
 $S_j = 21.26\%$

**Upper Limit = 12.5%**

**Lower Limit = -29.16%**

**Range = 9.27 to 50.93**

---

**Flow Rate Percentage Differences:**

**Sampler #1:** (See Sect. 3-4)

**Sampler #2:** (See Sect. 3-4)

**Sampler #3:** (See Sect. 3-4)

**Sampler #4:** (See Sect. 3-4)

#### 4TH QUARTER AVERAGE CALCULATION

**Extra**

47.61

### **3.4 Single Instrument Accuracy**

Estimates of accuracy for ambient air quality measurements from the TSP method are calculated from the results of independent audits. Once each sampling quarter, the flow rate of each high-volume sampler is audited.

Jim Henry with the IEPA Collinsville Field Office audited the sampler motors. Results of the audit are on record at the field office

### **3.5 Documentation**

For each of the sampling episodes, data packages have been assembled to facilitate the retrieval of necessary data to perform and check calculations, assumptions and determinations and to generate accurate reports. These packages are maintained in a central project file at Chemetco.

Data forms are attached with backup and confirmatory information in Appendices A through C. They include:

- Filter Conditioning and TSP Calculation Logsheets;
- Calculation pages; and,
- Laboratory Analyses Report Sheet.

**APPENDIX A**

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

**Project Number:** 00QTR4

**Purpose:** Sampler Averages

**Total Number of Pages:** 6 (including this one)

**Date:** January 22, 2001

**Originator's Signature:**

A handwritten signature in black ink, appearing to read "Heather Y.", is written over a horizontal line. The signature is stylized with a large, looping flourish at the end.

2000 4TH QUARTER AVERAGE CALCULATION

LOCATION N3-QC

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
10/03/00	9018892*	85019.3	83580.4	1438.9	45.7	1973	4741	236500	2.40	119.88	Ran along with N3
10/04/00	9018914	86451	85021	1430	46.4	2004	129	44000	0.06	21.96	
10/09/00	9018909*	86453.2	86453.2	0							Did not run/wrong day
10/15/00	9018909	87894.6	86454.8	1439.8	45.7	1973	6	53400	0.00	27.07	Did not run/wrong day
10/21/00	9019117*	87896.6	87896.6	0							
10/27/00	9019121	89335.8	87897.8	1438	46.4	2004	6	132200	0.00	65.97	
11/02/00	9019124*	91067.5	89337	1730.5							Motor Out
11/09/00	9019132*	91069.4	91069.4	0							Timer problem
11/14/00	9019138	92506.2	91070.9	1435.3	45	2020	30	36900	0.01	18.27	
11/16/00	9019143*	92508.1	92508.1	0							Timer problem.
11/20/00	9019143	93980	92508.7	1471.3	46.4	2048	96	42500	0.05	20.75	New timer installed
11/26/00	9019149	1441.8	1.8	1440	45.3	1957	6	42700	0.00	21.82	
12/02/00	9019164*	1443.2	1443.2	0							Timer problem
12/04/00	9019164	2882.5	1443.2	1439.3	45	1943	82.3	76900	0.04	39.58	(skips Saturdays)
12/05/00	9019166	4315.5	2884.4	1431.1	45.7	1962	1109	114800	0.57	58.51	
12/08/00	9019174	5757	4317	1440	48.3	2085	2697	167600	1.29	80.38	
12/14/00	6048425	7198.5	5758	1440.5	43.6	1884	1664	153.7	0.88	0.08	
12/20/00	6048417	8570.2	7200	1370.2	44.3	1821	4066	67000	2.23	36.79	
12/26/00	6048361	10085.1	8645	1440.1	43.6	1884	140	63000	0.07	33.45	
AVERAGE 0.42										30.25	

\*Not included in average due to reason noted

2000 4TH QUARTER AVERAGE CALCULATION

LOCATION N3

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/fltr	TSP ug/fltr	LEAD ug/m3	TSP ug/m3	
10/03/00	9018891*	486.6	0	486.6							
10/04/00	9018915	1434	0	1434	44.5	1914	6	39500	0.00	20.63	
10/09/00	9018910	1421	0	1421	43.9	1871	6	81600	0.00	43.60	
10/15/00	9018905	1420	0	1420	45.1	1921	6	43600	0.00	22.69	
10/21/00	9019113	1424	0	1424	45.1	1927	734	137400	0.38	71.31	
10/27/00	9019131	1424	0	1424	45.1	1927	117	120500	0.06	62.54	
11/02/00	9019128*										Motor Out
11/09/00	9019132	1425	0	1425	47.3	2022	6	22800	0.00	11.28	
11/14/00	9019137	1421	0	1421	47.3	2016	30	35400	0.01	17.56	
11/16/00	9019142	1421	0	1421	47.3	2016	4103	107800	2.03	53.46	
11/20/00	9019148	1420	0	1420	48	2045	96	30100	0.05	14.72	
11/26/00	9019157	1420	0	1420	47.7	2032	6	77900	0.00	38.34	
12/02/00	9019161	1420	0	1420	47.3	2015	82.3	56000	0.04	27.79	
12/04/00	9019170	1437	0	1437	48	2069	1109	134900	0.54	65.19	
12/05/00	9019171*	1393	0	1393	47.3	1977	1109	134900	0.56	68.25	Lack of time
12/08/00	9019175*	1393	0	1393	48	2006	333.4	120700	0.17	60.17	Lack of time
12/14/00	9019172	1424	0	1424	47.3	2021	39	116900	0.02	57.85	
12/20/00	6048417	1420	0	1420	46.7	1989	4591	104200	2.31	52.38	
12/26/00	6048412	1419	0	1419	46.7	1920	140	60700	0.00	17.12	
AVERAGE 0.38										38.43	

\*Not included in average due to reason noted



Ran Over/did not analyze

**\*Not included in average due to reason noted**

2000 4TH QUARTER AVERAGE CALCULATION

LOCATION O3

DATE	FILTER NO.	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
10/03/00	9018888	54841.8	53401.8	1440	45.3	1957	163	123900	0.08	63.31
10/09/00	9018912	56284.2	54844.2	1440	45.3	1957	3057	83200	1.56	42.51
10/15/00	9018906	57725.3	56285.5	1439.8	44.6	1926	397	86300	0.21	34.42
10/21/00	9019115	59166.7	57726.7	1440	44.6	1927	6	113500	0.00	58.91
10/27/00	9019119	60608.2	59168.2	1440	45.3	1957	733	132100	0.37	67.50
11/02/00	9019126	62050.1	60610	1440.1						
11/09/00	9019134	63493	62053	1440	43.2	1866	6	7700	0.00	4.13
11/14/00	9019140	64937.7	63496.9	1440.8	46	2017	1894	22500	0.94	11.16
11/16/00	9019146*	66379.7	64939.7	1440	49.9	2156	10103	142500	4.69	66.10
11/20/00	9019152*	67821.4	66381.4	1440	49.3	2130	16346	203700	7.68	95.64
11/26/00	9019155*	69261.1	67824.1	1437	49.9	2151	11435	160400	5.32	74.56
12/02/00	9019162	70706	69266	1440	48	2074	82.3	43800	0.04	21.12
12/08/00	9019167	72147.6	70707.6	1440	47.3	2043	1307	111700	0.64	54.66
12/14/00	6048420	75049.5	73629.5	1420	46.7	1989	3393	87300	1.71	43.88
12/15/00	6048418	75049.5	73629.5	1420	46.7	1989	39	58300	0.02	29.31
12/20/00	6048413*	77510	76441.7	1068.3	46	2017	785.6	41500	0.39	20.58
12/26/00	6048364	78951.5	77511.4	1440.1	45.3	1957	455	48500	0.23	24.78
12/28/00	6048366*	80373.4	78953.1	1420.3						
12/30/00	6048373*	82240.4	80396.7	1843.7						
=====										
AVERAGE 0.48										39.76
=====										

Wrong day/did not analyze  
Upset condition (hole in roof) weather prohibited  
Not enough time  
Fuse blown/did not fuse  
Ran over/fuse/did run

1.57 ug/m<sup>3</sup> = 15

\*Not included in average due to reason noted

2000 4TH QUARTER AVERAGE CALCULATION

LOCATION	FB				
DATE	FILTER NO.	LEAD ug/filter	TSP ug/filter		
10/03/00	9018887	49.2	-6400		
10/09/00	9018908	6	2500		
10/15/00	9019116	6	1800		
10/21/00	9019111	6	-4900		
10/27/00	9019123	6	-3200		
11/09/00	9019135	6	-3500		
11/14/00	9019141	6	-400		
11/18/00	9019153	6	-2200		
11/20/00	9019154	6	-6100		
11/28/00	9019159	6	-1200		
12/02/00	9019165	6	13100		
12/08/00	9019173	6	30700		
12/14/00	6048421	6	-100		
12/20/00	6048414	6	-2400		
12/26/00	6048365	6	500		
AVERAGES:		8.88	1213.33		

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

**Project Number:** 00QTR4

**Purpose:** Sampler Precision Calculation

**Total Number of Pages:** 2 (including this one)

**Date:** January 22, 2001

**Originator's Signature:**

A handwritten signature in black ink, appearing to read "W. H. H. S.", is written over a horizontal line.

### SAMPLER PRECISION CALCULATION (PARTICULATE)

<u>Sampling Date</u>	<u>Duplicate Sampler</u>	<u>Official Sampler</u>	<u>Difference</u>	<u>Difference (Square)</u>
10-03-00	119.88	Timer problem	—	—
10-04-00	21.96	20.63	1.33	1.77
10-09-00	Incorrect day	43.60	—	—
10-15-00	27.07	22.69	4.38	19.18
10-21-00	Did not run	71.31	—	—
10-27-00	65.97	62.54	3.43	11.76
11-02-00	Motor out	Motor out	—	—
11-09-00	Timer	11.28	—	—
11-14-00	18.27	17.56	0.71	0.50
11-16-00	Timer problem	53.46	—	—
11-20-00	20.75	14.72	6.03	36.36
11-26-00	21.82	38.34	-16.52	272.91
12-02-00	Timer problem	27.79	—	—
12-04-00	39.58	65.19	-25.61	655.87
12-05-00	58.51	Lack of time	—	—
12-08-00	80.38	Lack of time	—	—
12-14-00	0.08	57.85	-57.77	3,337.37
12-20-00	36.79	52.38	-15.59	243.05
12-26-00	33.45	17.12	16.33	266.67
			$\Sigma d_i =$	$\Sigma d_i^2 =$
			-83.28	4845.4

$n=10$

$$d_j = \frac{\Sigma d_j}{n} = \frac{-83.28}{10} = -8.33\%$$

$$S_j = \frac{\Sigma (d_i)^2 - n(d_j)^2}{n-1} = \frac{4845 - 10(77.72)}{10-1} = \frac{4845 - 777.2}{9} = 21.26\%$$

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2} = -8.33\% + \frac{1.96(21.26)}{2} = -8.33 + 20.83 = 12.5\%$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2} = -8.33\% - \frac{1.96(21.26)}{2} = -8.33 - 20.83 = -29.16\%$$

Official Average Particulate: 38.43 mg/m<sup>3</sup>

Range: 9.27 to 50.93

## APPENDIX B

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 16-Oct-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018889	OS	278.2	149.4
G9018888	O3	163	123.9
G9018891	N3	393	53.6
G9018892	N3QC	4,741	236.5
G9018890	Extra	6,229	239.2
G9018887	FB	49.20	-6.4
G9018915	N3	<6	39.5
G9018914	N3QC	129	44

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Oct-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018913	OS	369	63.8
G9018912	O3	3,057	83.2
G9018910	N3	<6	81.6
G9018908	FB	<6	2.5

Analyst:

Matt Shoemaker

Title:

Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Oct-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018907	OS	14.5	45.7
G9018906	O3	397	66.3
G9018905	N3	<6	43.6
G9018909	N3QC	<6	53.4
G9019116	FB	<6	1.8

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 30-Oct-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019114	OS	<6	120.9
G9019115	O3	<6	113.5
G9019113	N3	734	137.4
G9019117	N3QC	<6	-1
G9019112	Extra	2,101	130.9
G9019111	FB	<6	-4.9

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 3-Nov-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019120	OS	<6	92.8
G9019119	O3	733	132.1
G9019122	N3	117	120.5
G9019121	N3QC	<6	132.2
G9019118	Extra	<6	104.9
G9019123	FB	<6	-3.2

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 17-Nov-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019133	OS	346	52.4
G9019134	O3	<6	7.7
G9019131	N3	<6	22.8
G9019132	N3QC	<6	-5
G9019130	Extra	96	16.8
G9019135	FB	<6	-3.5

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 21-Nov-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019139	OS	154	21.8
G9019140	O3	1,894	22.5
G9019137	N3	30	35.4
G9019138	N3QC	30	36.9
G9019136	Extra	30	39.5
G9019141	FB	<6	-0.4

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 29-Nov-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019145	OS	<6	49.3
G9019146	O3	10,103	142.5
G9019142	N3	4,103	107.8
G9019144	Extra	451	73.8
G9019153	FB	<6	-2.2

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 4-Dec-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019151	OS	<6	29.7
G9019152	O3	16,346	203.7
G9019148	N3	96	30.1
G9019143	N3QC	96	42.5
G9019150	Extra	96	46.1
G9019154	FB	<6	-6.1

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 6-Dec-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019156	OS	<6	81.1
G9019155	O3	11,435	160.4
G9019157	N3	<6	77.9
G9019149	N3QC	<6	42.7
G9019158	Extra	<6	73.1
G9019159	FB	<6	-1.2

Analyst:

Matt Shoemaker

Title:

Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 12-Dec-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019163	OS	<6	58.8
G9019162	O3	82.3	43.8
G9019161	N3	82.3	56
G9019164	N3QC	DID NOT RUN	
G9019160	Extra	<6	44.8
G9019165	FB	<6	13.1

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

**Chemetco, Inc.**  
**Rt. 3 at Chemetco Lane**  
**Hartford, IL 62048**

**ATTN: Heather Young**

**Date: 12-Dec-00**

**Sample type:**

**Hi-Vol Air Monitoring Program**

**Sample Identification:**

**Listed below**

<b>Filter ID</b>	<b>Location</b>	<b>Pb, ug/filter</b>	<b>TSP,mg/filter</b>
G9019171	N3	1,109	134.9
G9019166	N3QC	1,109	114.8

**Analyst:**

**Matt Shoemaker**

**Title:**

**Laboratory Technician**

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 12-Dec-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019170	N3	82.3	67.3
G9019164	N3QC	82.3	76.9

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Analyst:

Matt Shoemaker

Title:

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Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Dec-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019168	OS	9,929	166.4
G9019167	O3	1,307	111.7
G9019173	FB	<6	30.7

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Dec-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019169	Extra	<6	97.3

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Dec-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019175	N3	333.4	120.7
G9019174	N3QC	2,697	167.6

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Analyst: Matt Shoemaker

---

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 19-Dec-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048422	OS	<6	102.4
G6048420	O3	3,393	87.3
G6048421	FB	<6	-0.1

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 22-Dec-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9019172	N3	39.0	116.9
G6048425	N3QC	1,664	153.7
G6048424	Extra	851.9	135.8

Analyst:

Matt Shoemaker

Title:

Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 22-Dec-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048418	O3	39.0	58.3

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Analyst: Matt Shoemaker

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Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 28-Dec-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048415	OS	129.4	55.7
G6048413	O3	785.6	41.5
G6048416	N3	4,591	104.2
G6048417	N3QC	4,066	67
G6048419	Extra	17,060	185.6
G6048414	FB	<6	-2.4

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 5-Jan-01

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6048363	OS	140	62.9
G6048364	O3	455	48.5
G6048412	N3	140	60.7
G6048361	N3QC	140	63
G6048362	Extra	140	54.7
G6048365	FB	<6	0.5

Analyst: Matt Shoemaker

Title: Laboratory Technician

## APPENDIX C

# Chemetco Environmental Management Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning				Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G9019174	11/30/00	12/04/00	4393.7	12/14/00	12/18/00	4561.3	167.6	
G9019175	11/30/00	12/04/00	4418.2	12/14/00	12/18/00	4538.9	120.7	
G6048361	12/15/00	12/18/00	4270.3	12/29/00	1/03/01	4333.3	63	
G6048362	12/15/00	12/18/00	4273.6	12/29/00	1/03/01	4328.3	54.7	
G6048363	12/15/00	12/18/00	4247.0	12/29/00	1/03/01	4309.9	62.9	
G6048364	12/15/00	12/18/00	4280.8	12/29/00	1/03/01	4329.3	48.5	
G6048365	12/15/00	12/18/00	4285.6	12/29/00	1/03/01	4286.1	0.5	
G6048366	12/15/00	12/18/00	4252.0					
G6048367	12/15/00	12/18/00	4271.1					
G6048368	12/15/00	12/18/00	4270.5					
G6048369	12/15/00	12/18/00	4257.2					
G6048370	DONT HAVE							
G6048371	12/15/00	12/18/00	4263.1					
G6048372	12/15/00	12/18/00	4231.8					
G6048373	12/15/00	12/18/00	4298.0					
G6048374	12/15/00	12/18/00	4303.9					

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G9019158	11/17/00	11/20/00	44179.5	11/28/00	12/04/00	4552.6	73.1
G9019159	11/17/00	11/20/00	4466.7	11/28/00	12/04/00	4465.5	-1.2
G9019160	11/17/00	11/20/00	4452.7	12/8/00	12/12/00	4497.5	44.8
G9019161	11/17/00	11/20/00	4459.1	12/8/00	12/12/00	4515.1	5.6
G9019162	11/17/00	11/20/00	4459.2	12/8/00	12/12/00	4503.0	43.8
G9019163	11/17/00	11/20/00	4404.5	12/8/00	12/12/00	4463.3	58.8
G9019164	11/17/00	11/20/00	4404.6	12/8/00	12/12/00	4481.5	76.9
G9019165	11/17/00	11/20/00	4400.6	12/8/00	12/12/00	4413.7	13.1
G9019166	11/17/00	11/20/00	4451.2	12/8/00	12/12/00	4566.0	114.8
G9019167	11/17/00	11/20/00	4457.3	12/14/00	12/18/00	4569.0	111.7
G9019168	11/17/00	11/20/00	4456.8	12/14/00	12/18/00	4623.2	166.4
G9019169	11/17/00	11/20/00	4445.6	12/14/00	12/18/00	4542.9	97.3
G9019170	11/17/00	11/20/00	4399.7	12/18/00	12/12/00	4467.0	67.3
G9019171	11/17/00	11/20/00	4445.6	12/8/00	12/12/00	4580.5	134.9
G9019172	11/30/00	12/04/00	4348.4	12/20/00	12/22/00	4465.3	116.9
G9019173	11/30/00	12/04/00	4397.9	12/14/00	12/18/00	4428.6	30.7

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg
G9019142	11/10/00	11/13/00	4457.8	11/24/00	11/28/00	4565.6	107.8
G9019143	11/10/00	11/13/00	4462.1	<del>11/27/00</del> 11/27/00	12/01/00	4504.6	42.5
G9019144	11/10/00	11/13/00	4485.2	11/24/00	11/28/00	4559.0	73.8
G9019145	11/10/00	11/13/00	4454.8	11/24/00	11/28/00	4504.1	49.3
G9019146	11/10/00	11/13/00	4442.8	11/24/00	11/28/00	4585.3	142.5
G9019147	11/10/00	11/13/00	4459.9				
G9019148	11/10/00	11/13/00	4437.9	11/27/00	12/01/00	4468.0	30.1
G9019149	11/10/00	11/13/00	4432.6	11/28/00	12/04/00	4475.3	42.7
G9019150	11/10/00	11/13/00	4448.5	11/27/00	12/01/00	4494.6	46.1
G9019151	11/10/00	11/13/00	4453.8	11/27/00	12/01/00	4483.5	29.7
G9019152	11/10/00	11/13/00	4453.1	11/27/00	12/01/00	4656.8	203.7
G9019153	11/10/00	11/13/00	4469.8	11/24/00	11/28/00	4467.6	-2.2
G9019154	11/17/00	11/20/00	4485.9	11/27/00	12/01/00	4479.8	-6.1
G9019155	11/17/00	11/20/00	4446.3	11/28/00	12/04/00	4606.7	160.4
G9019156	11/17/00	11/20/00	4421.9	11/28/00	12/04/00	4503.0	81.1
G9019157	11/17/00	11/20/00	4455.9	11/28/00	12/04/00	4533.7	77.9

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G9019126	10/17/00	10/19/00	4448.1				
G9019127	10/17/00	10/19/00	4439.1				
G9019128	10/17/00	10/19/00	4463.4				
G9019129	10/17/00	10/19/00	4476.9				
G9019130	10/17/00	10/19/00	4436.2	11/14/00	11/14/00	4453.0	16.8
G9019131	10/17/00	10/19/00	4405.9	11/14/00	11/16/00	4428.7	22.8
G9019132	10/17/00	10/19/00	4458.6	11/14/00	11/16/00	4453.6	-5
G9019133	10/17/00	10/19/00	4465.7	11/14/00	11/16/00	4518.1	52.4
G9019134	10/17/00	10/19/00	4493.7	11/14/00	11/16/00	4501.4	7.7
G9019135	10/17/00	10/19/00	4492.5	11/14/00	11/16/00	4489.0	-3.5
G9019136	11/10/00	11/13/00	4469.6	11/17/00	11/20/00	4509.1	39.5
G9019137	11/10/00	11/13/00	4478.4	11/17/00	11/20/00	4513.8	35.4
G9019138	11/10/00	11/13/00	4448.0	11/17/00	11/20/00	4484.9	36.9
G9019139	11/10/00	11/13/00	4478.5	11/17/00	11/20/00	4500.3	21.8
G9019140	11/10/00	11/13/00	4480.1	11/17/00	11/20/00	4502.6	22.5
G9019141	11/10/00	11/13/00	4473.3	11/17/00	11/20/00	4472.9	-0.4



# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G9018915	9/28/00	10/2/00	4433.6	10/9/00	10/11/00	4473.1	39.5
G9019111	9/28/00	10/02/00	4429.5	10/25/00	10/30/00	4424.6	-4.9
G9019112	9/28/00	10/02/00	4430.7	10/25/00	10/30/00	4561.6	130.9
G9019113	9/28/00	10/02/00	4425.7	10/25/00	10/30/00	4563.1	137.4
G9019114	9/28/00	10/02/00	4459.3	10/25/00	10/30/00	4580.2	120.9
G9019115	9/28/00	10/02/00	4467.5	10/25/00	10/30/00	4581.0	113.5
G9019116	9/28/00	10/02/00	4473.2	10/17/00	10/19/00	4475.0	1.8
G9019117	9/28/00	10/02/00	4426.5	10/25/00	10/30/00	4425.5	-1
G9019118	10/17/00	10/19/00	4480.9	11/1/00	11/3/00	4585.8	104.9
G9019119	10/17/00	10/19/00	4443.6	11/1/00	11/3/00	4575.7	132.1
G9019120	10/17/00	10/19/00	4414.1	11/1/00	11/3/00	4506.9	92.8
G9019121	10/17/00	10/19/00	4432.7	11/1/00	11/3/00	4564.9	132.2
G9019122	10/17/00	10/19/00	4447.9	11/1/00	11/3/00	4568.4	120.5
G9019123	10/17/00	10/19/00	4410.1	11/1/00	11/3/00	4406.9	-3.2
G9019124	10/17/00	10/19/00	4404.5				
G9019125	10/17/00	10/19/00	4452.3				

# Chemetco Environmental Management

## Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G9018899	9/18/00	9/20/00	4479.0	9/28/00	10/02/00	4588.1	109.1
G9018900	9/18/00	9/20/00	4422.6	9/27/00	9/29/00	4481.6	59
G9018901	9/18/00	9/20/00	4425.4	9/27/00	9/29/00	4497.5	72.1
G9018902	9/18/00	9/20/00	4441.9	9/27/00	9/29/00	4503.9	62
G9018903	9/18/00	9/20/00	4407.9	9/27/00	9/29/00	4464.7	56.8
G9018904	9/18/00	9-20-00	4400.6	9/27/00	9/29/00	4474.2	73.6
G9018905	9/28/00	10/02/00	4451.8	10/17/00	10/19/00	4495.4	43.6
G9018906	9/28/00	10/02/00	4454.5	10/17/00	10/19/00	4518.1	66.3
G9018907	9/28/00	10/02/00	4490.2	10/17/00	10/19/00	4535.9	45.7
G9018908	9/28/00	10/02/00	4471.9	10/17/00	10/19/00	4474.4	2.5
G9018909	9/28/00	10/02/00	4467.7	10/17/00	10/19/00	4521.1	53.4
G9018910	9/28/00	10/02/00	4447.5	10/17/00	10/19/00	4529.1	81.6
G9018911	9/28/00	10/02/00	4421.5				
G9018912	9/28/00	10/02/00	4439.9	10/17/00	10/19/00	4523.1	83.2
G9018913	9/28/00	10/02/00	4431.2	10/17/00	10/19/00	4495.0	63.8
G9018914	9/28/00	10/02/00	4434.3	10/17/00	10/19/00	4478.3	44

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G9018883	8/25/00	8/28/00	4458.7	9/18/00	9/20/00	4512.6	53.9
G9018884	8/25/00	8/28/00	4420.8	9/18/00	9/20/00	4500.8	80
G9018885	8/25/00	8/28/00	4503.5	9/18/00	9/20/00	4544.1	40.6
G9018886	8/25/00	8/28/00	4475.0	9/18/00	9/20/00	4475.3	0.3
G9018887	9/18/00	9/20/00	4443.4	10/11/00	10/11/00	4437.0	-6.4
G9018888	9/18/00	9/20/00	4454.4	10/11/00	10/11/00	4578.3	123.9
G9018889	9/18/00	9/20/00	4428.8	10/11/00	10/11/00	4570.2	149.4
G9018890	9/18/00	9/20/00	4428.8	10/11/00	10/11/00	4668.0	239.2
G9018891	9/18/00	9/20/00	4448.5	10/11/00	10/11/00	4502.1	53.6
G9018892	9/18/00	9/20/00	4465.2	10/11/00	10/11/00	4701.7	236.5
G9018893	9/18/00	9/20/00	4456.2	9/28/00	10/02/00	4456.5	0.3
G9018894	9/18/00	9/20/00	4413.9	9/28/00	9/29/00	4412.0	-1.8
G9018895	9/18/00	9/20/00	4474.4	9/28/00	10/02/00	4544.8	70.4
G9018896	9/18/00	9/20/00	4438.0	9/28/00	10/02/00	4554.3	116.3
G9018897	9/18/00	9/20/00	4465.1	9/28/00	10/02/00	4532.1	67
G9018898	9/18/00	9/20/00	4422.4	9/28/00	10/02/00	4496.8	74.4

# Chemetco Environmental Management Filter Conditioning Logsheet

## Pre Sampling Conditioning      Post Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048423	11/30/00	12/04/00	4229.9					
G6048424	11/30/00	12/04/00	4243.0	12/20/00	12/22/00	4378.8	135.8	
G6048425	11/30/00	12/04/00	4255.8	12/20/00	12/22/00	4409.5	153.7	
G6048426								
G6048427								
G6048428								
G6048429								
G6048430								
G6048431								
G6048432								
G6048433								
G6048434								
G6048435								
G6048436								
G6048437								
G6048438								

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning      Post Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6048407	11/3/01	1/5/01	4343.9					
G6048408	11/3/01	1/5/01	4330.9					
G6048409	11/3/01	1/5/01	41300.4					
G6048410	11/3/01	1/5/01						
G6048411	11/3/01	1/5/01	4258.3					
G6048412	11/30/00	12/04/00	4273.9	12/29/00	1/03/01	4334.6	60.7	
G6048413	11/30/00	12/04/00	4266.7	12/22/00	12/28/00	4308.2	41.5	
G6048414	11/30/00	12/04/00	41299.4	12/22/00	12/28/00	41297.0	2.4	
G6048415	11/30/00	12/04/00	4279.2	12/22/00	12/28/00	4334.9	55.7	
G6048416	11/30/00	12/04/00	4263.0	12/22/00	12/28/00	4367.2	104.2	
G6048417	11/30/00	12/04/00	4267.5	12/22/00	12/28/00	4334.5	67	
G6048418	11/30/00	12/04/00	4270.3	12/22/00	12/28/00	4324.6	58.3	
G6048419	11/30/00	12/04/00	4247.9	12/22/00	12/28/00	4433.5	185.6	
G6048420	11/30/00	12/04/00	41287.7	12/14/00	12/18/00	41375.0	87.3	
G6048421	11/30/00	12/04/00	4291.0	12/14/00	12/18/00	4290.9	-0.1	
G6048422	11/30/00	12/04/00	4263.8	12/14/00	12/18/00	41356.2	102.4	



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ETS/VB

October 27, 2000

AIR ENFORCEMENT BRANCH  
U.S. EPA, REGION 5

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: Second Quarter 2000 Ambient Air Monitoring Report

Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report July - September, 2000 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. This monitor is not included in the official approved ambient air monitoring program and is included as an attachment to this letter at the request of the Illinois EPA.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,



Heather Young, CHMM  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA--Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File

## 2000

## Extra

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
07/05/00	6047792	47906	46466	1440	45.8	1979	879.2	50000	0.44	252.71
07/11/00	6047784	32194.4	49347.3	47907.3	45.2	1953	2891	162000	1.48	82.95
07/17/00	6047780	50788.4	49348.4	1440	44.6	1927	3424	207200	1.78	107.54
07/23/00	6047802	Power	Failure	Did not	run					
07/29/00	6047802	52229.3	50789.3	1440	44.6	1927	215	68500	0.11	35.55
08/04/00	6047808	53671.2	52231.2	1440	45.8	1979	6	64400	0.00	32.55
08/10/00	6047851	55112.6	53672.6	1440	45.8	1979	6	110900	0.00	56.05
08/16/00	9018857	56554	55114	1440	45.8	1979	6	177300	0.00	89.61
08/22/00	6047748	Power	Failure	Electrical	problem					
08/28/00	6047748	Motor	Failure	Ran out	of filters.					
09/03/00	9018870	59457.4	58130.2	1327.2	45.7	1964	1426	161000	0.73	81.98
09/09/00	9018880	60898.7	59458.7	1440	45.7	1964	25271	280000	12.87	142.57
09/15/00	9018885	62119.9	60890	1229.9	46.4	1712	196	40600	0.11	23.71
09/21/00	9018904	Power	failure.							
09/27/00	9018899	64770	63423.6	1346.4	45.7	1846	582	109100	0.32	59.10
										AVERAGE 1.62
										87.67

**AMBIENT AIR MONITORING**  
**QUARTERLY REPORT**  
**JULY - SEPTEMBER 2000**  
**FOR**  
**TOTAL PARTICULATE**  
**AND LEAD**

**CHEMETCO, INC.**  
**October 2000**





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## **1.0 INTRODUCTION**

This document presents the summary of the third calendar quarter year 2000 ambient air monitoring performed at the Chemetco, Inc. facility in Madison County.

### **1.1 Monitoring Description**

The third quarter ambient air monitoring began on July 1, 2000, and sampling for total suspended particulates and lead in the particulate was performed on a once every sixth day basis. The quarterly sampling ended on September 30, 2000. Each day, a weather log was maintained documenting wind speed, wind direction, temperature, relative humidity and precipitation. Site data is utilized unless there is problem with the computer or program. In such a case, the information is obtained from the Nation Weather Service and recorded by the security guard.

The location of the monitoring sites was based on a modeling report done by Versar, Inc. and approved by IEPA. All locations are shown on a map in Figure 1-1.

Standard operating procedures were followed for the filter conditioning, sampling, sampler operation, analyses, etc, are shown in Table 1.1. Complete copies of the SOP's were provided in the Ambient Air Monitoring Quality Assurance/Quality Control Plan.

### **1.2 Monitoring Report**

The following pages contain the results of the third quarter monitoring. Section 2 contains an accounting of all the test dates and reasons for eliminating data from certain test dates. Section 3 contains the quarterly averages, the quality assurance data and meteorological data. The Appendices include copies of the Filter Conditioning Logsheets with total suspended particulate calculation, the laboratory analysis, and the calculation worksheets.

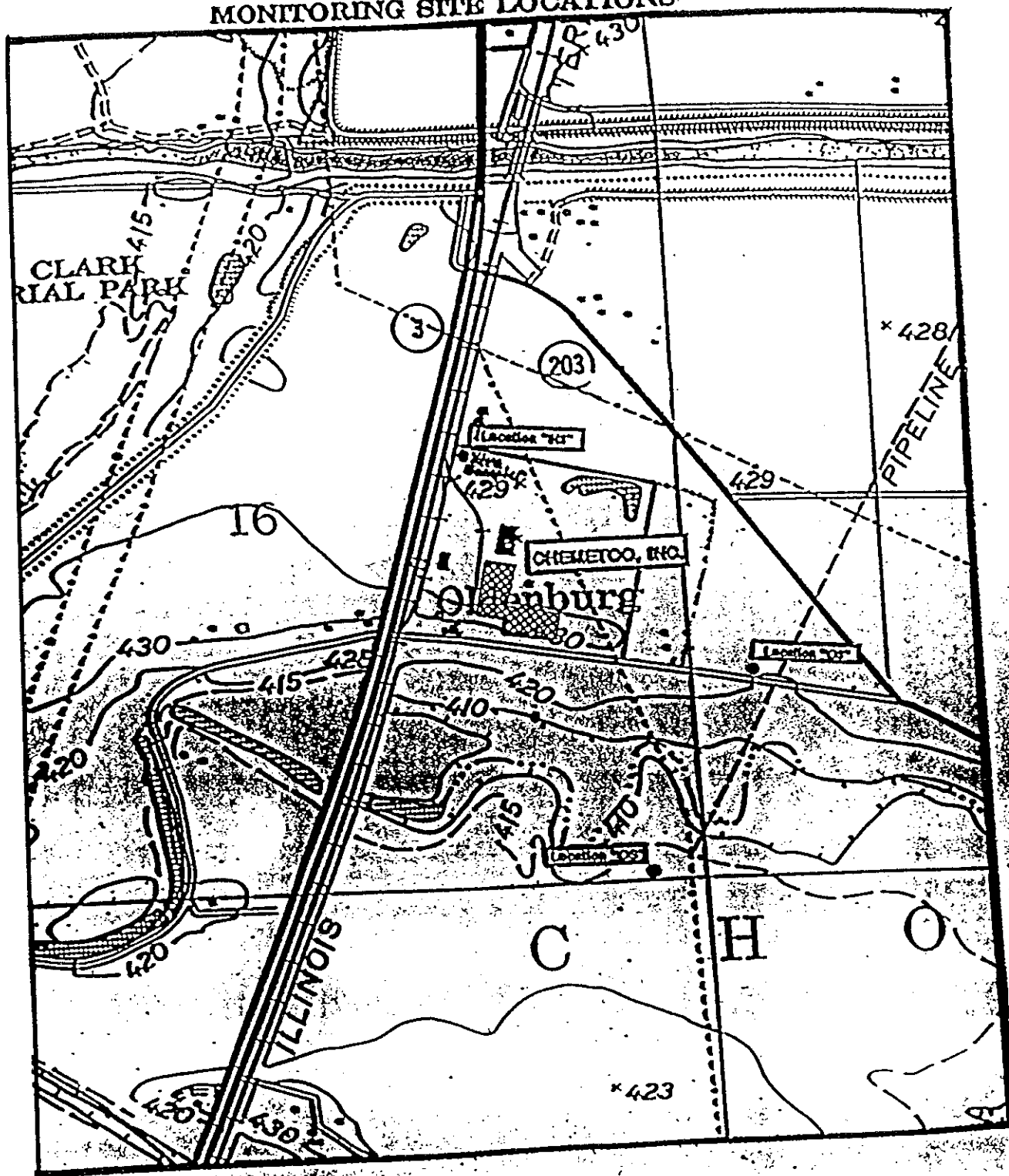
### **Relocation of Colocated Northern Monitors**

Chemetco believed that all data collected from N3 and N3-QC at their former location just south of the facility's northern fence was highly questionable and not valid. As evidenced by an analysis of quarterly ambient air monitoring, the monitors in their former location had been significantly impacted by nearby facility activities, structures, microclimatic influences, and/or surrounding entrained materials. The IEPA agreed with Chemetco regarding the need to relocate the northern monitors as outlined below.

Chemetco requested in a letter dated June 18, 1998, to IEPA to move the colocated ambient air monitors located in the northern portion of the facility in order to obtain samples which truly represent ambient air. The relocation was approved by IEPA in a letter dated June 24, 1998. Sampling of the ambient air monitors in the new location was initiated July 25, 1998. Additional sampling events were scheduled that same week to allow the collection of the appropriate number of samples for the third quarter 1998. Sampling proceeded as scheduled in the current location until the new monitors were in place. Chemetco is also utilizing dedicated Dickson recorders for all four

official air monitors, the new colocated N3 and N3-QC, OS and O3. The aforementioned relocation of the northern ambient air monitors has allowed the collection of a more representative sample of ambient air similar to that collected by the ambient air monitors OS and O3.

FIGURE 1-1  
MONITORING SITE LOCATIONS



**TABLE 1-1**  
**STANDARD OPERATING PROCEDURES**

Determination of Total Suspended Particulates in Ambient Air Filters

Filter Conditioning

Lead Analysis in Ambient Air Filters

Operation of GMW 2310 TSP Samplers

Packaging and Shipment of Samples



## 2.0 SAMPLING DATE ACCOUNTING

Following is a list of the dates the monitors were to have run. Table 2.1 accounts the dates and events.

TABLE 2.1 - Sample Date Accounting

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
07-05-00	N3-QC	OK	Yes	Power failure
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
07-11-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	No	No	
07-17-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
07-23-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
07-19-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
08-04-00	N3-QC	No	No	Did not run, new motor needed
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
08-10-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
08-16-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
08-22-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
08-28-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
09-03-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

TABLE 2.1 - Sample Date Accounting (con't)

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
09-09-00	N3-QC	OK	Yes	Breaker blew out during run/Not enough time
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
09-15-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
09-21-00	N3-QC	OK	Yes	
	N3	No	No	
	OS	OK	Yes	
	O3	OK	Yes	
09-27-00	N3-QC	OK	Yes	
	N3	OK	Yes	

### 3.0 MONITORING DATA

After the receipt from the laboratory of all data for the quarterly report, averages for each monitoring site were calculated from the pool of data. In addition, at site N3, two samplers were set up for quality assurance purposes. A standard deviation, lower and upper range was determined based on those samples and under normal circumstances can be assumed to represent accuracy for all locations.

Each day, meteorological data was noted. The weather information was obtained from both the National Weather Service and the on-site weather station. There were a few days during the last quarter where the information was not obtained by the guard from the National Weather Service and the on site program did not operate. In order to insure that data is available in the future, Chemetco is looking into a third source of weather information. Chemetco is looking at subscribing to the Midwest Climate Center's database. This should alleviate any future "holes" in the weather logs. These logs are shown in Figure 3.1 and quarterly averages are discussed in Section 3.2.

#### 3.1 Quarterly Averages Calculation

From the pool of acceptable data, quarterly averages were calculated by using the simple arithmetic mean determination shown in Equation 1.

$$X = \frac{\sum X_i}{n} \quad \text{Equation 1}$$

where,

$X_i$  = individual sampling data,

$n$  = the number of valid sampling points in the quarter.

**FIGURE 3-1  
METEOROLOGICAL DATA SHEET**

**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
07-01-00	6.50	45		71	77	0.02
07-02-00	9.00	135		71	82	0.00
07-03-00						0.00
07-04-00	8.00	202		78	87	0.00
*07-05-00	9.00	180		86	71	0.00
07-06-00						0.00
07-07-00	6.00	112		83	71	0.00
07-08-00	8.00	67		82	70	0.00
07-09-00	8.00	135		81	61	0.00
07-10-00	7.00	180		80	62	0.00
*07-11-00	9.00	180		82	72	0.00
07-12-00	12.00	180		80	90	0.50
07-13-00	4.00	157		86		0.00
07-14-00	5.00	250		87	76	0.00
07-15-00	3.00	306		85	62	0.00
07-16-00	4.00	152		82	59	0.00
*07-17-00	4.00	171		77	66	0.00
07-18-00	5.00	219		81	82	0.30
07-19-00	8.00	319		75		2.00
07-20-00	1.00	169		73		0.02
07-21-00	5.50	90		90	78	0.00
07-22-00	4.00	90		69	71	0.00
*07-23-00	5.00	0		71	70	0.00
07-24-00	6.00	338		85	73	0.00
07-25-00	4.0	137		76		0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
07-26-00	7.00	135		85		0.00
07-27-00	6.00	154		83		0.00
07-28-00	6.00	162		76	78	0.50
*07-29-00	3.00	213		75	78	0.00
07-30-00	2.00	296		77	93	0.10
07-31-00	3.00	264		76	91	0.20
08-01-00	2.50	208		81	89	0.00
08-02-00	5.50	182		83	77	0.00
08-03-00	5.00	184		83	66	0.00
*08-04-00	6.00	149		79		0.00
08-05-00						0.00
08-06-00	13.00	135		76	70	0.10
08-07-00	7.00	90		73	73	0.04
08-08-00						0.09
08-09-00	3.00	135		82	76	0.00
*08-10-00	6.00	173		84	75	0.00
08-11-00	2.00	332		83		0.00
08-12-00	4.00	145		81		0.00
08-13-00	5.00	117		77		0.00
08-14-00	6.00	129		82		0.00
08-15-00	4.50	175		88		0.00
*08-16-00	5.00	142		87	79	0.00
08-17-00	9.00	72		79	79	0.00
08-18-00	6.50	342		82	74	0.00
08-19-00	6.00	322		73	69	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind		Temperature (F)	Relative Humidity %	Precipitation
		Direction	Sigma			
08-20-00	7.00	133		71		0.30
08-21-00	8.00	120		75		0.00
*08-22-00	7.50	118		83		0.00
08-23-00	4.00	153		83		0.00
08-24-00	7.00	38		84	69	1.26
08-25-00	4.00	35		82	66	0.00
08-26-00	10.00	72		82	71	0.06
08-27-00	9.00	76		82	82	0.00
*08-28-00	7.00	77		83	81	0.00
08-29-00	10.00	77		86	74	0.00
08-30-00	7.00	60		87	87	0.00
08-31-00	8.00	102		83	28	0.00
09-01-00	10.00	103		73	88	0.00
09-02-00	5.00	74		85	70	0.00
*09-03-00	7.00	90		84	69	0.00
09-04-00	8.00	38		86	66	0.00
09-05-00	8.00	73		86	65	0.00
09-06-00	6.00	44		85	64	0.00
09-07-00						0.00
09-08-00						0.00
*09-09-00	12.00	105		78	78	0.00
09-10-00	12.00	157		76	73	0.00
09-11-00	11.00	157		77	75	0.55
09-12-00	12.00	157		80	73	0.41

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
09-13-00	10.00	90		81	68	0.10
09-14-00	12.00	180		73	74	0.62
*09-15-00						0.00
09-16-00	10.00	45		69	46	0.00
09-17-00	6.00	0		60	48	0.00
09-18-00	6.00	0		60	48	0.00
09-19-00	12.00	135		63	46	0.00
09-20-00	14.00	157		70	39	0.00
*09-21-00	1.00	246		64	69	2.00
09-22-00	1.00	146		72	51	0.00
09-23-00	2.00	215		78	65	0.00
09-24-00	2.00	347		64	74	0.10
09-25-00	0.00	318		54	89	0.10
09-26-00	0.00	266		59	80	1.25
*09-27-00	0.00	149		65	81	0.00
09-28-00	0.00	303		69	81	0.00
09-29-00	2.50	148		66	79	0.00
09-30-00	3.00	130		69	58	

\* Denotes Air Sampling Date

### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

**TABLE 3.1 - Sampler Location N3**

DATE	FILTER NO	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
07/05/00	6047794	0.00	81.58
07/11/00	6047786	0.57	61.17
07/17/00	6047776	0.40	61.65
07/23/00	6047801	0.00	25.17
07/29/00	6047806	0.04	31.67
08/04/00	6047813	0.00	27.03
08/10/00	6047852	0.00	43.08
08/16/00	6047856	0.00	65.89
08/22/00	9018860	3.06	118.20
08/28/00	9018866	1.31	83.09
09/03/00	9018871	0.36	82.72
09/09/00	9018876	6.53	100.84
09/15/00	9018882	0.04	25.36
09/21/00	9018900	Breaker blew out	
09/27/00	9018896	0.00	17.12
		=====	=====
	AVERAGE	0.88	58.90



TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
07/05/00	6047790	0.14	104.81
07/11/00	6047788	0.00	37.10
07/17/00	6047778	0.00	29.74
07/23/00	6047797	0.00	19.78
07/29/00	6047804	0.00	24.13
08/04/00	6047812	0.00	22.90
08/10/00	6047818	1.66	50.55
08/16/00	9018855	0.00	61.49
08/22/00	9018864	0.00	58.58
08/28/00	9018868	0.00	52.78
09/03/00	9018872	0.00	75.15
09/09/00	9018879	0.00	11.21
09/15/00	9018884	2.10	39.15
09/21/00	9018903	0.43	32.79
09/27/00	9018897	0.00	34.77
		=====	=====
	AVERAGE	0.29	43.66

TABLE 3.3 - Sampler Location O3

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
07/05/00	6047791	0.44	188.46
07/11/00	6047789	Power failure	
07/17/00	6047789	0.06	31.90
07/23/00	6047800	0.11	44.99
07/29/00	6047805	0.04	21.64
08/04/00	6047811	0.00	22.02
08/10/00	6047817	0.00	38.14
08/16/00	9018858	0.00	63.36
08/22/00	9018863	0.00	59.18
08/28/00	9018867	0.00	45.69
09/03/00	9018873	0.00	64.11
09/09/00	9018878	0.00	40.51
09/15/00	9018883	0.10	26.72
09/21/00	9018902	0.14	31.67
09/27/00	9018895	<u>0.00</u>	<u>35.97</u>
		=====	=====
	AVERAGE	0.07	51.03

TABLE 3.4 - Filter Blank

DATE	FILTER NO.	LEAD (ug/filter)	TSP* (ug/filter)
07/05/00	6047783	6	160
07/11/00	6047781	6	300
07/17/00	6047779	6	600
07/23/00	6047803	6	4900
07/29/00	6047810	6	3300
08/04/00	6047816	6	4100
08/10/00	6047854	6	0
08/16/00	9018859	6	0
08/22/00	9018865	6	1600
08/28/00	9018869	6	-5800
09/03/00	9018875	6	-3300
09/09/00	9018886	6	300
09/15/00	Not enough filters		
09/21/00	9018894	6	-1800
09/27/00	9018893	6	300
		=====	=====
	AVERAGE	5.57	300.40

\*TSP - Total Suspended Particulate

### 3.3 Instrument Precision Calculation

The estimates of precision for ambient air quality measurements from the TSP method are calculated from results obtained from the collection of two samplers at one sampling site, N3. The calculated precision from this one sampling site is considered indicative of the precision at all sampling sites for the TSP method.

Using the paired measurements for the official sampler, labeled "N3" and the secondary sampler, labeled "N3-QC," the precision was calculated from the following equations. These numbers are reported on the Data Assessment Report shown in Figure 3-2.

#### Percentage Difference, $d_i$

$$d_i = \frac{Y_i - X_i}{X_i} \times 100\%$$

where:  $Y_i$  = the concentration TSP measured by the secondary sampler; and  
 $X_i$  = the concentration TSP measured by the official sampler.

#### Average Percentage Difference, $d_j$

$$d_j = \frac{\sum d_i}{n}$$

where:  $n$  = the number of comparisons.

#### Standard Deviation, $S_j$

$$S_j = \sqrt{\frac{\sum (d_i)^2 - n(d_j)^2}{n - 1}}$$

#### 96% Probability Limits

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2}$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2}$$

**FIGURE 3-2  
DATA ASSESSMENT REPORT**

**Date:** October 27, 2000  
**Auditor:** Heather Young

---

**Allocated Samplers**

$d_i = 45.51$   
 $d_j = 3.5 \%$   
 $S_j = 11.26 \%$

**Upper Limit = 14.53 %**

**Lower Limit = -7.53%**

**Range = 51.37 to 73.43**

---

**Flow Rate Percentage Differences:**

**Sampler #1:** (See Sect. 3-4)

**Sampler #2:** (See Sect. 3-4)

**Sampler #3:** (See Sect. 3-4)

**Sampler #4:** (See Sect. 3-4)

### **3.4 Single Instrument Accuracy**

Estimates of accuracy for ambient air quality measurements from the TSP method are calculated from the results of independent audits. Once each sampling quarter, the flow rate of each high-volume sampler is audited.

Jim Henry with the IEPA Collinsville Field Office audited the sampler motors. Results of the audit are on record at the field office

### 3.5 Documentation

For each of the sampling episodes, data packages have been assembled to facilitate the retrieval of necessary data to perform and check calculations, assumptions and determinations and to generate accurate reports. These packages are maintained in a central project file at Chemetco.

Data forms are attached with backup and confirmatory information in Appendices A through C. They include:

- Filter Conditioning and TSP Calculation Logsheets;
- Calculation pages; and,
- Laboratory Analyses Report Sheet.

## **APPENDIX A**



**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

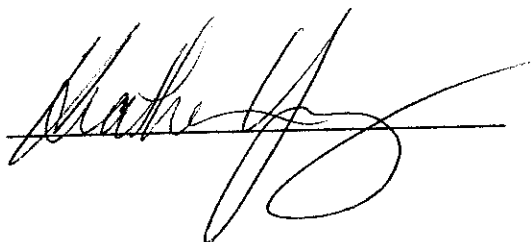
**Project Number:** 00QTR3

**Purpose:** Sampler Averages

**Total Number of Pages:** 6 (including this one)

**Date:** October 27, 2000

**Originator's Signature:** \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Mark H. [unclear]", written over a horizontal line.

## 2000

**LOCATION: N3**

[illegible]

2000 3RD QUARTER AVERAGE CALCULATION

LOCATION: N3-QC

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ftlr	TSP ug/ftlr	LEAD ug/m3	TSP ug/m3
07/05/00	6047793	63406.4	61966.9	1439.5	43.7	1887	6	173400	0.00	91.88
07/11/00	6047787	64847.2	63407.7	1439.5	44.4	1917	1071	125000	0.56	65.19
07/17/00	6047777	66287.5	64848.5	1439	44.4	1917	1388	163900	0.72	85.51
07/23/00	6047799	67727.2	66289	1438.2	44.4	1916	6	54600	0.00	28.50
07/29/00	6047807	69168.6	67729.1	1439.5	44.4	1917	72	62100	0.04	32.39
08/04/00	Did not run. New		Motor needed.							
08/10/00	6047814	72050.8	70611.2	1439.6	44.6	1926	6	102300	0.00	53.11
08/16/00	9018853	73492.5	72053.4	1439.1	47	2020	6	133200	0.00	65.94
08/22/00	9018861	74933.5	73494	1439.5	47.7	2060	4665	191700	2.26	93.06
08/28/00	9018862	76375.2	74935.5	1439.7	46.4	2004	1546	177900	0.77	88.77
09/03/00	9018874	77816.8	76377.1	1439.7	45.3	1957	782	158600	0.40	81.06
09/09/00	9018877	79257.9	77817.9	1440	47	2030	14331	215300	7.06	106.04
09/15/00	9018881	80699.7	79259	1440.7	46.4	2005	71	53200	0.04	26.53
09/21/00	9018901	82138.7	80701.1	1437.6	46.4	2001	6	72100	0.00	36.03
09/27/00	9018898	83579	82139	1440	46.4	2004	6	50800	0.00	25.34
=====										AVERAGE 0.85
=====										62.81

## 2000

80

DATE	FILTER NO	FINISH	TIME	START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ftlr	TSP ug/ftlr	LEAD ug/m3	TSP ug/m3
07/05/00	6047790	1440		0	1440	45.3	1957	279	205100	0.14	104.81
07/11/00	6047788	1440		0	1440	45.3	1957	6	72600	0.00	37.10
07/17/00	6047778	1440		0	1440	43.9	1896	6	56400	0.00	29.74
07/23/00	6047797	1440		0	1440	46.7	2017	6	39900	0.00	19.78
07/29/00	6047804	1440		0	1440	46.7	1927	6	46500	0.00	24.13
08/04/00	6047812	1440		0	1440	47.3	2043	6	46800	0.00	22.90
08/10/00	6047818	1440		0	1440	47.3	2043	3382	103300	1.66	50.55
08/16/00	9018855	1440		0	1440	48	2074	6	127500	0.00	61.49
08/22/00	9018864	1440		0	1440	48	2074	6	121500	0.00	58.58
08/28/00	9018868	1440		0	1440	45.3	1957	6	103300	0.00	52.78
09/03/00	9018872	1440		0	1440	44.6	1927	6	144800	0.00	75.15
09/09/00	9018879	1440		0	1440	47.3	2043	6	22900	0.00	11.21
09/15/00	9018884	1440		0	1440	47.3	2043	4296	80000	2.10	39.15
09/21/00	9018903	1440		0	1440	40.1	1732	752.9	56800	0.43	32.79
09/27/00	9018897	1440		0	1440	44.6	1927	6	67000	0.00	34.77
AVERAGE 0.29											43.66

2000 3RD QUARTER AVERAGE CALCULATION

LOCATION: O3

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/fttr	TSP ug/fttr	LEAD ug/m3	TSP ug/m3		
07/05/00	6047791	34655.5	33215.5	1440	46	1987	879.2	374500	0.44	188.46		
07/11/00	6047789	34657	34657	Did not	run.	Power	failure.					
07/17/00	6047789	36101.5	34660.4	1441.1	46.7	2019	115	64400	0.06	31.90		
07/23/00	6047800	37542.6	36102.6	1440	46	1987	222	89400	0.11	44.99		
07/29/00	6047805	38983.7	37543.7	1440	46	1987	72	43000	0.04	21.64		
08/04/00	6047811	40425	38985	1440	47.3	2043	6	45000	0.00	22.02		
08/10/00	6047817	41866.5	40426.5	1440	46	1987	6	75800	0.00	38.14		
08/16/00	9018858	43308.5	41868.5	1440	46.7	2017	6	127800	0.00	63.36		
08/22/00	9018863	44749.9	43309.8	1440.1	46.7	2018	6	119400	0.00	59.18		
08/28/00	9018867	46191.9	44751.9	1440	46	1987	6	90800	0.00	45.69		
09/03/00	9018873	47633.4	46193.4	1440	46	1987	6	127400	0.00	64.11		
09/09/00	9018878	49075.4	47635.4	1440	46	1987	6	80500	0.00	40.51		
09/15/00	9018883	50517.2	49077.2	1440	46.7	2017	195.6	53900	0.10	26.72		
09/21/00	9018902	51958.5	50518	1440.5	45.3	1958	282.3	62000	0.14	31.67		
09/27/00	9018895	53400.4	51960.4	1440	45.3	1957	6	70400	0.00	35.97		
=====										AVERAGE	0.07	51.03
=====										=====		

2000 3RD QUARTER AVERAGE CALCULATION

LOCATION: FB

DATE	LEAD FILTER NO	LEAD ug/filter	TSP ug/filter
07/05/00	6047783	6	160
07/11/00	6047781	6	300
07/17/00	6047779	6	600
07/23/00	6047803	6	4900
07/29/00	6047810	6	3300
08/04/00	6047816	6	4100
08/10/00	6047854	6	0
08/16/00	9018859	6	0
08/22/00	9018865	6	1600
08/28/00	9018869	6	-5800
09/03/00	9018875	6	-3300
09/09/00	9018886	6	300
09/15/00	Not enough	filters.	
09/21/00	9018894	6	-1800
09/27/00	9018893	6	300

=====

AVERAGES 5.57 300.40

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

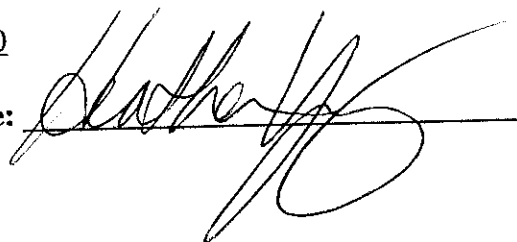
**Project Number:** 00QTR3

**Purpose:** Sampler Precision Calculation

**Total Number of Pages:** 2 (including this one)

**Date:** October 27, 2000

**Originator's Signature:**

A handwritten signature in black ink, written over a horizontal line. The signature is stylized and appears to be "D. H. Smith".

### SAMPLER PRECISION CALCULATION (PARTICULATE)

<u>Sampling Date</u>	<u>Duplicate Sampler</u>	<u>Official Sampler</u>	<u>Difference</u>	<u>Difference (Square)</u>
07-05-00	91.88	81.58	10.03	106.09
07-11-00	65.19	61.17	4.02	16.16
07-17-00	85.51	61.65	23.86	569.30
07-23-00	28.50	25.17	3.33	11.09
07-29-00	32.39	31.67	0.72	0.52
08-04-00	—	27.03	—	—
08-10-00	53.11	43.08	10.03	100.60
08-16-00	65.94	65.89	0.05	0.0025
08-22-00	93.06	118.20	-25.14	632.02
09-28-00	88.77	83.09	5.68	32.26
09-03-00	81.06	82.72	-1.66	2.76
09-09-00	106.04	100.84	5.20	27.04
09-15-00	26.53	25.36	1.17	1.37
09-21-00	36.03	—	—	—
09-27-00	25.34	17.12	8.22	67.57
			$\Sigma d_i =$	$\Sigma d_i^2 =$
			45.51	1566.78

$n=13$

$$d_j = \frac{\Sigma d_j}{n} = \frac{45.51}{13} = 3.50\%$$

$$S_j = \sqrt{\frac{\Sigma(d_j)^2 - n(d_j)^2}{n-1}} = \sqrt{\frac{1567 - 13(3.5)^2}{13-1}} = \sqrt{\frac{1567 - 45.5}{12}} = 11.26\%$$

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2} = 3.5\% + \frac{1.96(11.26)}{2} = 3.5 + 11.03 = 14.53\%$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2} = 3.5\% - \frac{1.96(11.26)}{2} = 3.5 - 11.03 = -7.53\%$$

Official Average Particulate: 58.90 mg/m<sup>3</sup>

Range: 51.37 to 73.43



## APPENDIX B

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 14-Jul-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047790	OS	<6	144.3
G6047791	O3	311	92
G6047794	N3	<6	151.5
G6047793	N3QC	<6	173.4
G6047792	Extra	<6	203.7
G6047783	FB	<6	1.6

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 21-Jul-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047788	OS	<6	72.6
G6047789	O3	<6	0
G6047786	N3	1071	115.3
G6047787	N3QC	1071	125
G6047784	Extra	2891	162
G6047781	FB	<6	0.3

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 21-Jul-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047778	OS	<6	56.4
G6047789	O3	115	64.4
G6047776	N3	751	114.4
G6047777	N3QC	1388	163.9
G6047780	Extra	3424	207.2
G6047779	FB	<6	0.6

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 1-Aug-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047797	OS	<6	39.9
G6047800	O3	222	89.4
G6047801	N3	<6	45.5
G6047799	N3QC	<6	54.6
G6047802	Extra	did not run	
G6047803	FB	<6	4.9

Matt Creasy

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 3-Aug-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047804	OS	<6	46.5
G6047805	O3	72	43
G6047806	N3	72	60.5
G6047807	N3QC	72	62.1
G6047802	Extra	215	68.5
G6047810	FB	<6	3.3

*Matthew Creasy*

Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 15-Aug-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047812	OS	<6	46.8
G6047811	O3	<6	45
G6047813	N3	<6	51.6
	N3QC	DID NOT RUN	
G6047808	Extra	<6	64.4
G6047816	FB	<6	4.1

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 16-Aug-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047818	OS	3,382	103.3
G6047817	O3	<6	75.8
G6047852	N3	<6	87.4
G6047814	N3QC	<6	102.3
G6047851	Extra	<6	110.9
G6047854	FB	<6	0

Analyst: Matt Creasy

Title: Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 22-Aug-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018855	OS	<6	127.5
G9018858	O3	<6	127.8
G9018856	N3	<6	119.2
G9018853	N3QC	<6	133.2
G9018857	Extra	<6	177.3
G9018859	FB	<6	0

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 30-Aug-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018860	N3	5,601	216.5
G9018861	N3QC	4665	191.7
G9018863	O3	<6	119.4
G9018864	OS	<6	121.5
G9018865	FB	<6	1.6

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 12-Sept.-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018872	OS	<6	144.8
G9018873	O3	<6	127.4
G9018871	N3	653	151.3
G9018874	N3QC	782	158.6
G9018870	Extra	1,426	161
G9018875	FB	<6	-3.3

Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 25-Sep-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018879	OS	<6	22.9
G9018878	O3	<6	80.5
G9018876	N3	11,941	184.3
G9018877	N3QC	14,331	215.3
G9018880	Extra	25,271	280
G9018886	FB	<6	0.3

Analyst:

Matt Shoemaker

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 25-Sep-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018884	OS	4296	80
G9018883	O3	195.6	53.9
G9018882	N3	71	47
G9018881	N3QC	71	53.2
G9018885	Extra	196	40.6

---

Analyst: Matt Shoemaker

---

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 2-Oct-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018903	OS	752.9	56.8
G9018902	O3	282.3	62
G9018900	N3	<6	59
G9018901	N3QC	<6	72.1
G9018904	Extra	518	73.6
G9018894	FB	<6	-1.8

Analyst: Matt Shoemaker

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 4-Oct-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G9018897	OS	<6	67
G9018895	O3	<6	70.4
G9018896	N3	725	116.3
G9018898	N3QC	840	74.4
G9018899	Extra	582	109.1
G9018893	FB	<6	0.3

Analyst: Matt Shoemaker

Title: Laboratory Technician

## APPENDIX C



# Chemetco Environmental Management Filter Conditioning Logsheet

## Pre Sampling Conditioning      Post Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G9018899	9/18/00	9/20/00	4479.0	9/28/00	10/02/00	4588.1	109.1	
G9018900	9/18/00	9/20/00	4422.6	9/27/00	9/29/00	4481.6	59	
G9018901	9/18/00	9/20/00	4425.4	9/27/00	9/30/00	4497.5	72.1	
G9018902	9/18/00	9/20/00	4441.9	9/27/00	9/29/00	4503.9	62	
G9018903	9/18/00	9/20/00	4407.9	9/27/00	9/29/00	4464.7	56.8	
G9018904	9/18/00	9/20/00	4400.6	9/27/00	9/29/00	4474.2	73.6	
G9018905	9/28/00	10/02/00	4451.8					
G9018906	9/28/00	10/02/00	4454.5					
G9018907	9/28/00	10/02/00	4490.2					
G9018908	9/28/00	10/02/00	4471.9					
G9018909	9/28/00	10/02/00	4467.7					
G9018910	9/28/00	10/02/00	4447.5					
G9018911	9/28/00	10/02/00	4421.5					
G9018912	9/28/00	10/02/00	4439.9					
G9018913	9/28/00	10/02/00	4431.2					
G9018914	9/28/00	10/02/00	4434.3					

# Chemetco Environmental Management Filter Conditioning Logsheet

## Post Sampling Conditioning

## Pre Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G9018883	8/25/00	8/28/00	4458.7	9/18/00	9/20/00	4512.6	53.9	
G9018884	8/25/00	8/28/00	4420.8	9/18/00	9/20/00	4500.8	80	
G9018885	8/25/00	8/28/00	4503.5	9/18/00	9/20/00	4544.1	40.6	
G9018886	8/25/00	8/28/00	4475.0	9/18/00	9/20/00	4475.3	0.3	
G9018887	9/18/00	9/20/00	4443.4					
G9018888	9/18/00	9/20/00	4454.4					
G9018889	9/18/00	9/20/00	4420.8					
G9018890	9/18/00	9/20/00	4428.8					
G9018891	9/18/00	9/20/00	4448.5					
G9018892	9/18/00	9/20/00	4465.2					
G9018893	9/18/00	9/20/00	4456.2	9/28/00	10/02/00	4456.5	0.3	
G9018894	9/18/00	9/20/00	4413.9	9/28/00	9/29/00	4412.0	-1.8	
G9018895	9/18/00	9/20/00	4474.4	9/28/00	10/02/00	4544.8	70.4	
G9018896	9/18/00	9/20/00	44138.0	9/28/00	10/02/00	4554.3	116.3	
G9018897	9/18/00	9/20/00	44165.1	9/28/00	10/02/00	4532.1	67	
G9018898	9/18/00	9/20/00	4422.4	9/28/00	10/02/00	4496.8	74.4	

# Chemetco Environmental Management Filter Conditioning Logsheet

Pre Sampling Conditioning      Post Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G9018867	7/31/00	8/03/00	4411.3	8/31/00	9/4/00	4500.1	90.8	
G9018868	7/31/00	8/03/00	4409.7	8/31/00	9/4/00	4513.0	103.3	
G9018869	8/25/00	8/28/00	4452.6	8/31/00	9/4/00	4446.8	-5.8	
G9018870	8/25/00	8/28/00	4466.5	9/7/00	9/10/00	4627.5	161	
G9018871	8/25/00	8/28/00	4424.1	9/7/00	9/10/00	4575.4	151.3	
G9018872	8/25/00	8/28/00	4418.1	9/7/00	9/10/00	4562.9	144.8	
G9018873	8/25/00	8/28/00	4458.2	9/7/00	9/10/00	4585.6	127.4	
G9018874	8/25/00	8/28/00	4442.0	9/7/00	9/10/00	4600.6	158.6	
G9018875	8/25/00	8/28/00	4425.9	9/7/00	9/10/00	4422.6	-3.3	
G9018876	8/25/00	8/28/00	4437.7	9/18/00	9/10/00	4622.0	184.3	
G9018877	8/25/00	8/28/00	4428.0	9/18/00	9/10/00	4643.3	215.3	
G9018878	8/25/00	8/28/00	4415.8	9/18/00	9/10/00	4496.3	80.5	
G9018879	8/25/00	8/28/00	4438.1	9/18/00	9/10/00	4461.0	22.9	
G9018880	8/25/00	8/28/00	4438.5	9/18/00	9/10/00	4718.5	280	
G9018881	8/25/00	8/28/00	4454.5	9/18/00	9/10/00	41187.7	53.2	
G9018882	8/25/00	8/28/00	4454.6	9/18/00	9/10/00	4501.6	47	

# Chemetco Environmental Management Filter Conditioning Logsheet

## Pre Sampling Conditioning      Post Sampling Conditioning

Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G9018851	7/31/00	8/03/00	4392.6	8/14/00	8/16/00	4503.5	110.9	
G9018852	7/31/00	8/03/00	4372.4	8/14/00	8/16/00	4459.8	87.4	
G9018853	7/31/00	8/03/00	4370.6	8/18/00	8/21/00	4503.8	133.2	
G9018854	7/31/00	8/03/00	4396.1	8/14/00	8/16/00	4393.6	-2.5	
G9018855	7/31/00	8/03/00	4375.7	8/18/00	8/21/00	4503.2	127.5	
G9018856	7/31/00	8/03/00	4391.8	8/18/00	8/21/00	4511.0	119.2	
G9018857	7/31/00	8/03/00	4395.5	8/18/00	8/21/00	4572.8	177.3	
G9018858	7/31/00	8/03/00	4371.5	8/18/00	8/21/00	4499.3	127.8	
G9018859	7/31/00	8/03/00	4368.0	8/18/00	8/21/00	4368.0	0	
G9018860	7/31/00	8/03/00	4436.9	8/25/00	8/28/00	4653.4	216.5	
G9018861	7/31/00	8/03/00	4428.4	8/25/00	8/28/00	4620.1	191.7	
G9018862	7/31/00	8/03/00	4444.3	8/31/00	9/14/00	4622.2	177.9	
G9018863	7/31/00	8/03/00	4404.5	8/25/00	8/28/00	4523.9	119.4	
G9018864	7/31/00	8/03/00	4398.9	8/25/00	8/28/00	4520.4	121.5	
G9018865	7/31/00	8/03/00	4421.5	8/25/00	8/28/00	4419.9	1.6	
G9018866	7/31/00	8/03/00	4422.0	8/31/00	9/14/00	4576.4	154.4	

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Date Out	Post Sampling Conditioning		
	Date In	Date Out	Weight, mg			Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6047813	7-14-00	7-17-00	4330.2	8/10/00	8/14/00	4381.8	51.6	
G6047814	7-14-00	7-17-00	4346.8	8/14/00	8/16/00	4449.1	102.3	
G6047815								
G6047816	7-14-00	7-17-00	4339.2	8/10/00	8/14/00	4335.1	4.1	
G6047817	7-14-00	7-17-00	4324.4	8/14/00	8/16/00	4400.2	75.8	
G6047818	7-14-00	7-17-00	4340.6	8/14/00	8/16/00	4443.9	103.3	
G6047819								
G6047820								
G6047821								
G6047822								
G6047823								
G6047824								
G6047825								
G6047826								
G6047827								
G6047828								

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Date Out	Post Sampling Conditioning			
	Date In	Date Out	Weight, mg			Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6047797	7-14-00	7-17-00	4352.7	7/25/00		7/28/00	4392.6	39.9	
G6047798									
G6047799	7-14-00	7-17-00	4367.6	7/25/00		7/28/00	4422.2	54.6	
G6047800	7-14-00	7-17-00	4366.8	7/25/00		7/28/00	4456.2	89.4	
G6047801	7-14-00	7-17-00	4335.6	7/25/00		7/28/00	4381.1	45.5	
G6047802	7-14-00	7-17-00	4327.2	8/1/00		8/3/00	4395.7	68.5	
G6047803	7-14-00	7-17-00	4333.9	7/25/00		7/28/00	4329.0	4.9	
G6047804	7-14-00	7-17-00	4327.8	8/1/00		8/3/00	4374.3	46.5	
G6047805	7-14-00	7-17-00	4368.4	8/1/00		8/3/00	4411.4	43.0	
G6047806	7-14-00	7-17-00	4356.9	8/1/00		8/3/00	4417.4	60.5	
G6047807	7-14-00	7-17-00	4354.3	8/1/00		8/3/00	4416.4	62.1	
G6047808	7-14-00	7-17-00	4354.7	8/10/00		8/14/00	4419.1	64.4	
G6047809									
G6047810	7-14-00	7-17-00	4358.8	8/1/00		8/3/00	4355.5	3.3	
G6047811	7-14-00	7-17-00	4358.7	8/10/00		8/14/00	4403.7	45.0	
G6047812	7-14-00	7-17-00	4335.8	8/10/00		8/14/00	4382.6	46.8	

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning				Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6047792	6/27/00	6/29/00	4361.2	7/10/00	7/12/00	4564.9	203.7	
G6047793	6/27/00	6/29/00	4339.5	7/10/00	7/12/00	4512.9	173.4	
G6047794	6/27/00	6/29/00	4351.9	7/10/00	7/12/00	4503.4	151.5	
G6047795								
G6047796	6/27/00	6/29/00	4348.2	7/9/00	7/11/00	4350.6	2.4	
G6047797								
G6047798								
G6047799								
G6047800								
G6047801								
G6047802								
G6047803								
G6047804								
G6047805								
G6047806								
G6047807								

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning				Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6047776	6/27/00	6/29/00	4284.4	7/19/00	7/21/00	4398.8	114.4	
G6047777	6/27/00	6/29/00	4290.9	7/19/00	7/21/00	4454.8	163.9	
G6047778	6/27/00	6/29/00	4278.3	7/19/00	7/21/00	4334.7	56.4	
G6047779	6/27/00	6/29/00	4275.1	7/19/00	7/21/00	4275.7	0.6	
G6047780	6/27/00	6/29/00	4277.1	7/19/00	7/21/00	4484.3	207.2	
G6047781	6/27/00	6/29/00	4361.8	7/13/00	7/18/00	4361.5	0.3	
G6047782								
G6047783	6/27/00	6/29/00	4337.5	7/12/00	7/12/00	4339.1	1.6	
G6047784	6/27/00	6/29/00	4357.2	7/13/00	7/18/00	4519.2	162	
G6047785								
G6047786	6/27/00	6/29/00	4341.8	7/13/00	7/18/00	4457.1	115.3	
G6047787	6/27/00	6/29/00	4340.1	7/13/00	7/18/00	4465.1	125	
G6047788	6/27/00	6/29/00	4356.8	7/13/00	7/18/00	4429.4	72.6	
G6047789	6/27/00	6/29/00	4347.2	7/19/00	7/21/00	4411.6	64.4	
G6047790	6/27/00	6/29/00	4360.4	7/16/00	7/12/00	4504.9	144.3	
G6047791	6/27/00	6/29/00	4357.0	7/16/00	7/12/00	4449.0	92.0	





P.O. Box 67 • Hartford, IL 62048  
618-254-4381 • 800-444-5564

July 28, 2000

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: Second Quarter 2000 Ambient Air Monitoring Report

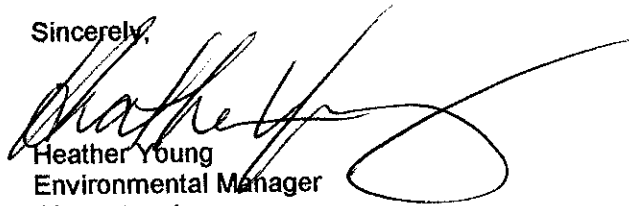
Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report April - June, 2000 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. Since this is not included in the official ambient air monitoring program, it is not included in the report.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,



Heather Young  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA-Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File



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AIR ENFORCEMENT BRANCH  
U.S. EPA, REG. 5

July 28, 2000

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

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If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,

A handwritten signature in black ink, appearing to read 'Heather Young', is written over the typed name and title.

Heather Young  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA—Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File

# 2000 2ND QUARTER AVERAGE CALCULATION

LOCATION		Extra									
DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>	
4/6/00*	6047563	30752	29312.1	1439.9	48.6	2099	879.2	500000	0.42	238.17	
4/12/00	6047576	32194.4	30754.5	1439.9	45.2	1953	6	93500	0.00	47.89	
4/18/00	6047712	33635.6	32195.7	1439.9	45.2	1953	5685	190300	2.91	97.46	
4/24/00	Did not Run										
4/30/00	6047715	35076.9	33636.8	1439.9	45.8	1978	15001	290400	7.58	146.78	
5/6/00**	6047728	36377	35077.8	1299.2	45.8	1785	15521	296500	8.69	166.10	
5/12/00	6047735	37818.2	36378.2	1440	46.3	2000	8889	291000	4.44	145.49	
5/18/00	6047744	39259.3	37819.3	1440	45.2	1953	21899	727000	11.22	372.32	
5/24/00	6047748	Power	Failure								
5/30/00	6047748	Operator	Error								
6/5/00	6047748	42138	40699.3	1438.7	46.3	1998	21	79700	0.01	39.88	
6/11/00	60477601	42140.6	40700.3	1440	45.8	1983	2372	153800	1.20	77.56	
6/17/00	6047768	43582.2	42142.2	1440	45.8	1979	6	62100	0.00	31.39	
6/23/00***	6047822	45023.2	43583.3	1439.9	45.8	1978	5923	187200	2.99	94.62	
6/27/00											
6/29/00	6047835	46464.9	45024.6	1440.3	45.8	1979	6	98000	0.00	49.52	
										AVERAGE	2.95
											129.88

\* Fields plowed/planted on this day and several days through mid May.

\*\* Upset condition - A trial test (not a normal activity) for a different type of crusher was being performed on the slag.

Did not run adequate time either.

\*\*\* Ran on wrong day and questions as to the amount of time it actually ran. Power failure.

(\*\* and \*\*\* not included in averages.)

ets/m  
pac  
8/3-08

**AMBIENT AIR MONITORING**  
**QUARTERLY REPORT**  
**APRIL - JUNE 2000**  
**FOR**  
**TOTAL PARTICULATE**  
**AND LEAD**

**CHEMETCO, INC.**  
**JULY 2000**



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## **1.0 INTRODUCTION**

This document presents the summary of the second 2000 calendar quarter ambient air monitoring performed at the Chemetco, Inc. facility in Madison County.

### **1.1 Monitoring Description**

The second quarter ambient air monitoring began on April 1, 2000, and sampling for total suspended particulates and lead in the particulate was performed on a once every sixth day basis. The quarterly sampling ended on June 30, 2000. Each day, a weather log was maintained documenting wind speed, wind direction, temperature, relative humidity and precipitation. This information has been obtained from the Nation Weather Service and recorded by the security guard. A new computer program was obtained and site data began to be collected on 3/6/00 once again.

The location of the monitoring sites was based on a modeling report done by Versar, Inc. and approved by IEPA. All locations are shown on a map in Figure 1-1.

Standard operating procedures were followed for the filter conditioning, sampling, sampler operation, analyses, etc, are shown in Table 1.1. Complete copies of the SOP's were provided in the Ambient Air Monitoring Quality Assurance/Quality Control Plan.

### **1.2 Monitoring Report**

The following pages contain the results of the second quarter monitoring. Section 2 contains an accounting of all the test dates and reasons for eliminating data from certain test dates. Section 3 contains the quarterly averages, the quality assurance data and meteorological data. The Appendices include copies of the Filter Conditioning Logsheets with total suspended particulate calculation, the laboratory analysis, and the calculation worksheets.

### **Relocation of Colocated Northern Monitors**

Chemetco believed that all data collected from N3 and N3-QC at their former location just south of the facility's northern fence was highly questionable and not valid. As evidenced by an analysis of quarterly ambient air monitoring, the monitors in their former location had been significantly impacted by nearby facility activities, structures, microclimatic influences, and/or surrounding entrained materials. The IEPA agreed with Chemetco regarding the need to relocate the northern monitors as outlined below.

Chemetco requested in a letter dated June 18, 1998, to IEPA to move the colocated ambient air monitors located in the northern portion of the facility in order to obtain samples which truly represent ambient air. The relocation was approved by IEPA in a letter dated June 24, 1998. Sampling of the ambient air monitors in the new location was initiated July 25, 1998. Additional sampling events were scheduled that same week to allow the collection of the appropriate number of samples for the third quarter 1998. Sampling proceeded as scheduled in the current location until the new monitors were in place. Chemetco is also utilizing dedicated Dickson recorders for all four

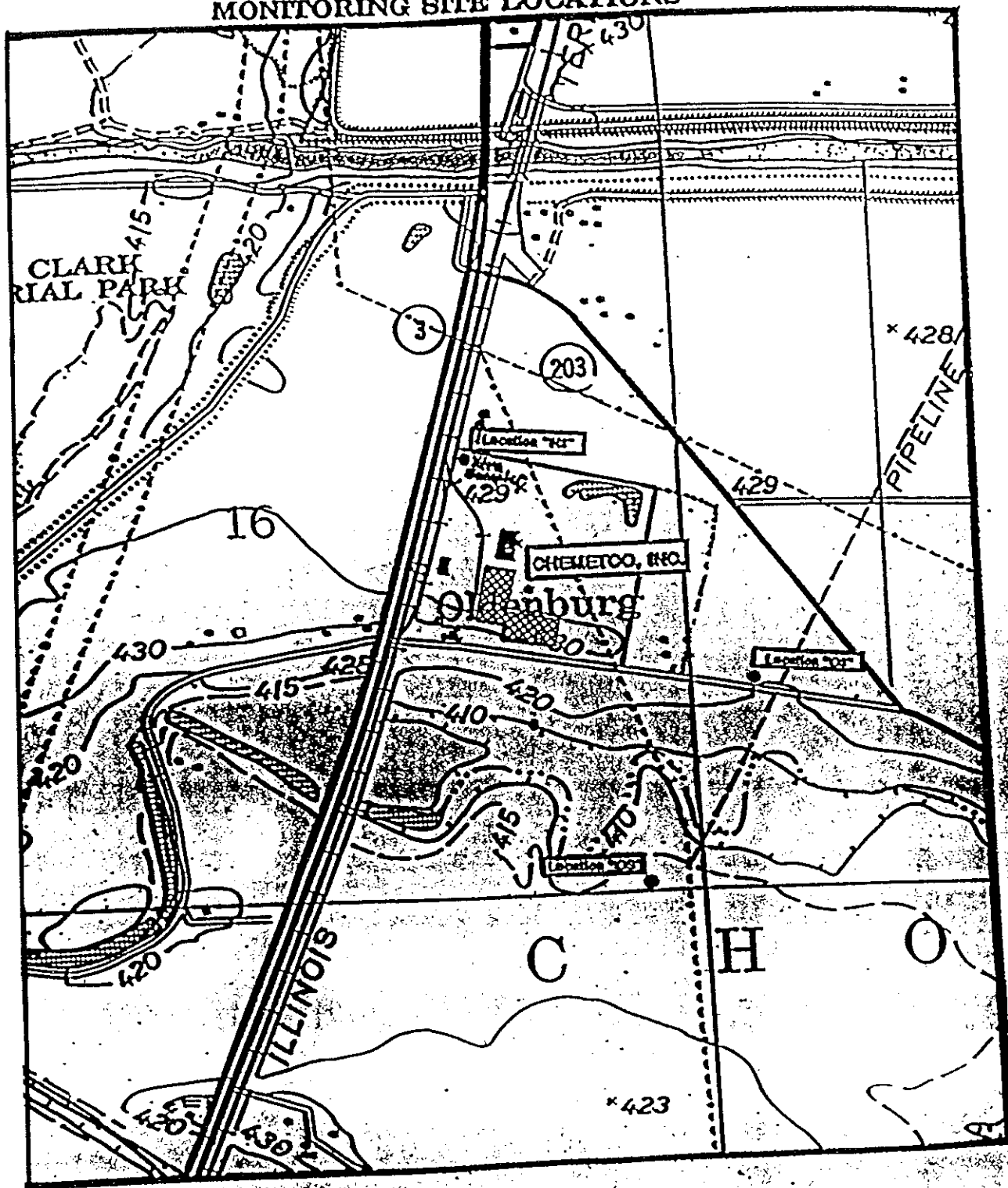
official air monitors, the new colocated N3 and N3-QC, OS and O3. The aforementioned relocation of the northern ambient air monitors has allowed the collection of truly ambient air similar to that collected by the ambient air monitors OS and O3.

### **Upset Conditions**

Several upset conditions were experienced during the second quarter of 2000. Upset conditions were reflected in the TSP values on several occasions. The fields were plowed and planted in April. Some fields were replowed and replanted again through mid May. The monitors are located within or adjacent this active farmland.

The second upset condition was experienced during the May 6, 2000, sampling event. A temporary/trial test with a new type of crusher was run on the slag during that week. Several different types of crushers are being tested and/or evaluated. Chemetco is considering the purchase of a new crusher to enable 100% of the currently generated slag to be utilized more efficiently. The particular type of crusher tested during the week of May 6, 2000, created too much dust and slag outside the product range. The next type of crusher to be tested is a cone crusher, which should generate less dust and fines. These temporary tests are less than a week and are being documented in the operating record per a discussion with John Blazis of the air permits section of Illinois EPA. A makeup sample should have been run but due to operator error was not.

FIGURE 1-1  
MONITORING SITE LOCATIONS



**TABLE 1-1**  
**STANDARD OPERATING PROCEDURES**

Determination of Total Suspended Particulates in Ambient Air Filters

Filter Conditioning

Lead Analysis in Ambient Air Filters

Operation of GMW 2310 TSP Samplers

Packaging and Shipment of Samples

## 2.0 SAMPLING DATE ACCOUNTING

Following is a list of the dates the monitors were to have run. Table 2.1 accounts the dates and events.

TABLE 2.1 - Sample Date Accounting

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
04-06-00	N3-QC	OK	Yes	Motor Out
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
04-012-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
04-18-00	N3-QC	OK	Yes	
	N3	No	No	
	OS	OK	Yes	
	O3	OK	Yes	
04-24-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
04-30-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
05-06-00	N3-QC	No	No	Upset Condition
	N3	No	No	Upset Condition
	OS	No	No	Upset Condition
	O3	No	No	Upset Condition
05-12-00	N3-QC	OK	Yes	Upset Condition
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
05-18-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
05-24-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
05-30-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
06-05-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

TABLE 2.1 - Sample Date Accounting (con't)

DATE	SAMPLER	RUN STATUS	QUALIFICATION	ERROR REASON
06-11-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
06-17-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	
06-23-00	N3-QC	No	No	Power Failure/Ran wrong day/Reran
	N3	No	No	Power Failure/Ran wrong day/Reran
	OS	OK	Yes	
	O3	OK	Yes	
06-27-00	N3-QC	OK	Yes	
	N3	OK	Yes	
06-29-00	N3-QC	OK	Yes	
	N3	OK	Yes	
	OS	OK	Yes	
	O3	OK	Yes	

### 3.0 MONITORING DATA

After the receipt from the laboratory of all data for the quarterly report, averages for each monitoring site were calculated from the pool of data. In addition, at site N3, two samplers were set up for quality assurance purposes. A standard deviation, lower and upper range was determined based on those samples and under normal circumstances can be assumed to represent accuracy for all locations.

Each day, meteorological data was noted. The weather information was obtained from both the National Weather Service and the on-site weather station. Most of the met data was obtained from the on-site weather station. A few of the data points were obtained from the National Weather Service when the on-site station/program experienced a problem. Calibration of the on-site weather is also being researched. These logs are shown in Figure 3.1 and quarterly averages are discussed in Section 3.2.

#### 3.1 Quarterly Averages Calculation

From the pool of acceptable data, quarterly averages were calculated by using the simple arithmetic mean determination shown in Equation 1.

$$X = \frac{\sum X_i}{n} \quad \text{Equation 1}$$

where,

$X_i$  = individual sampling data,

$n$  = the number of valid sampling points in the quarter.

**FIGURE 3-1**  
**METEOROLOGICAL DATA SHEET**  
**DAILY WEATHER LOGSHEET**

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
04-01-00	2	64		56	49	0.00
04-02-00	3	288		60	49	0.00
04-03-00	9	268		---	---	0.00
04-04-00	11	254		53	74	0.75
04-05-00	14	139		52	63	0.00
*04-06-00	6	332		44	44	0.00
04-07-00	11	267		49	48	0.00
04-08-00	14	293		---	---	0.00
04-09-00	8	164		47	63	0.25
04-10-00	8	120		58	47	0.02
04-11-00	11	295		61	52	0.00
*04-12-00	6	23		54	55	0.00
04-13-00	12	9		49	63	0.00
04-14-00	10	0		60	48	0.00
04-15-00	13	135		61	61	0.00
04-16-00	12	154		64	73	0.00
04-17-00	10	272		61	73	0.21
*04-18-00	7	238		53	76	0.00
04-19-00	19	122		54	76	0.00
04-20-00	21	199		64	71	0.01
04-21-00	14	290		60	75	0.00
04-22-00	4	207		52	61	0.00
04-23-00	7	153		60	43	0.00
*04-24-00	10	345		59	71	0.00
04-25-00	8	331		54	88	0.00

\* Denotes Air Sampling Date



FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
04-26-00	2	344		56	66	0.00
04-27-00	4	16		56	57	0.00
04-28-00	4	278		57	64	0.00
04-29-00	6	155		57	76	0.00
*04-30-00	8	155		60	76	0.00
05-01-00	8	221		67	63	0.00
05-02-00	9	41		70	72	0.00
05-03-00	9	124		69	71	0.00
05-04-00	11	133		68	90	0.00
05-05-00	12	127		72	79	0.00
*05-06-00	13	132		74	70	0.00
05-07-00	8	127		72	79	0.00
05-08-00	7	202		72	89	0.00
05-09-00	15	258		75	84	0.00
05-10-00	9	169		56	80	0.00
05-11-00	16	138		58	73	0.00
*05-12-00	16	190		65	66	0.25
05-13-00	11	276		65	76	0.00
05-14-00	4	228		63	63	0.00
05-15-00	6	107		61	57	0.00
05-16-00	7	180		57	59	0.32
05-17-00	21	151		57	68	0.00
*05-18-00	18	163		66	67	0.41
05-19-00	7	320		73	69	2.25
05-20-00	3	263		73	76	0.10

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
05-21-00	7	112		68	76	0.00
05-22-00	3	112		58	76	0.00
05-23-00	4	301		61	79	0.00
*05-24-00	4	219		65	82	0.00
05-25-00	4	290		72	64	0.00
05-26-00	7	105		69	61	0.11
05-27-00	10	188		69	69	0.00
05-28-00	9	259		67	94	0.00
05-29-00	7	246		69	86	0.00
*05-30-00	13	202		69	83	0.00
05-31-00	13	225		68	83	0.00
06-01-00	12	180		72	65	0.00
06-02-00	5	309		81	62	0.00
06-03-00	7	188		81	58	0.25
06-04-00	6	177		69	58	0.00
*06-05-00	11	307		66	94	0.00
06-06-00	5	338		69	85	0.00
06-07-00	7	134		60	46	0.00
06-08-00	9	159		62	43	0.00
06-09-00	8	152		66	45	0.00
06-10-00	8	165		75	54	0.00
*06-11-00	8	225		76	76	0.14
06-12-00	7	180		74	91	0.00
06-13-00	6	180		75	87	0.00

\* Denotes Air Sampling Date

FIGURE 3-1 (cont.)

## DAILY WEATHER LOGSHEET

Date	Wind Speed	Wind Direction	Sigma	Temperature (F)	Relative Humidity %	Precipitation
06-14-00	12	180		79		0.00
06-15-00	12	160		72	78	0.00
06-16-00	6	226		75	55	0.00
*06-17-00	1	333		75	100	0.00
06-18-00	4	324		71	87	0.00
06-19-00	5	161		66	70	0.20
06-20-00	14	147		68	76	0.26
06-21-00	10	208		68	100	0.00
06-22-00	8	182		72	84	0.00
*06-23-00	8	225		78	90	0.00
06-24-00	14	198		76	90	1.03
06-25-00	10	189		79	91	0.00
06-26-00	12	135		76	76	0.00
06-27-00	5	315		76	87	0.00
06-28-00	6	270		70	61	0.00
06-29-00	6	270		71	75	0.00
06-30-00	5	239		73	61	0.00

\* Denotes Air Sampling Date

### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

TABLE 3.1 - Sampler Location N3

DATE	FILTER NO	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
04/6/00	6047564	0.07	216.01 (Fields Plowed and Planted)
04/12/00	6047573	0.00	45.11
04/18/00	6047713	Motor Out	"
04/24/00	6047720	0.06	52.58
04/30/00	6047724	3.73	114.22
05/06/00	6047731	Upset Condition	"
05/12/00	6047739	2.54	111.49
05/18/00	6047745	1.80	216.72
05/24/00	6047752	0.00	59.97
05/30/00	6047759	8.34	174.32
06/05/00	6047766	0.01	33.67
06/11/00	6047774	0.91	64.49
06/17/00	6047767	0.00	30.84
06/23/00	6047828	Power Failure/Rerun	
06/27/00	6047833	0.00	17.12
06/29/00	6047840	0.00	37.37
		=====	=====
	AVERAGE	1.45	90.30

TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )	
04/6/00	6047566	0.14	103.21	(Fields Plowed and Planted
04/12/00	6047570	0.00	38.77	"
04/18/00	6047578	0.00	40.54	"
04/24/00	6047718	0.00	33.37	"
04/30/00	6047722	0.16	58.44	"
05/06/00	6047733	Upset condition		"
05/12/00	6047737	1.32	278.49	"
05/18/00	6047743	0.00	80.74	"
05/24/00	6047751	0.81	48.25	
05/30/00	6047756	0.00	37.73	
06/05/00	6047765	5.19	77.49	
06/11/00	6047773	0.00	36.13	
06/17/00	6047825	0.00	27.09	
06/23/00	6047830	0.00	36.49	
06/29/00	6047837	0.21	24.18	
		=====	=====	
	AVERAGE	0.56	65.78	

TABLE 3.3 - Sampler Location O3

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
04/6/00	6047567	0.48	203.51 (Field plowed and planted))
04/12/00	6047571	0.00	44.05 "
04/18/00	6047579	0.00	49.67 "
04/24/00	6047717	0.73	22.12 "
04/30/00	6047723	0.09	75.54 "
04506/00	6047732	0.07	43.67 "
05/12/00	6047736	2.21	147.71 "
05/18/00	6047742	0.54	110.54 "
05/24/00	6047750	3.18	103.11
05/30/00	6047755	0.00	46.74
06/05/00	6047764	0.96	92.88
06/11/00	6047771	0.00	35.05
06/17/00	6047824	0.00	25.13
06/23/00	6047831	0.00	48.61
06/29/00	6047836	<u>3.08</u>	<u>69.34</u>
	AVERAGE	0.81	76.71

TABLE 3.4 - Filter Blank

DATE	FILTER NO.	LEAD (ug/filter)	TSP* (ug/filter)
01/1/00	6047458	6	1300
01/7/00	6047465	6	0
01/13/00	6047472	17	-100
01/19/00	6047477	66	-6800
01/25/00	6047484	0	1800
01/31/00	6047492	6	500
02/6/00	6047499	6	-500
02/12/00	6047506	6	700
02/18/00	6047513	7	-100
02/24/00	6047519	0	400
03/1/00	6047526	6	-300
03/7/00	6047534	2	800
03/13/00	6047541	49	700
03/19/00	6047548	0	800
03/25/00	6047554	0	700
03/31/00	6047568	6	7600
		=====	=====
	AVERAGE	11.44	468.75

\*TSP - Total Suspended Particulate

### 3.3 Instrument Precision Calculation

The estimates of precision for ambient air quality measurements from the TSP method are calculated from results obtained from the collection of two samplers at one sampling site, N3. The calculated precision from this one sampling site is considered indicative of the precision at all sampling sites for the TSP method.

Using the paired measurements for the official sampler, labeled "N3" and the secondary sampler, labeled "N3-QC," the precision was calculated from the following equations. These numbers are reported on the Data Assessment Report shown in Figure 3-2.

#### Percentage Difference, $d_i$

$$d_i = \frac{Y_i - X_i}{X_i} \times 100\%$$

where:  $Y_i$  = the concentration TSP measured by the secondary sampler; and  
 $X_i$  = the concentration TSP measured by the official sampler.

#### Average Percentage Difference, $d_j$

$$d_j = \frac{\sum d_i}{n}$$

where:  $n$  = the number of comparisons.

#### Standard Deviation, $S_j$

$$S_j = \sqrt{\frac{\sum (d_i)^2 - n(d_j)^2}{n - 1}}$$

#### 96% Probability Limits

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2}$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2}$$



**FIGURE 3-2  
DATA ASSESSMENT REPORT**

**Date:** July 21, 2000  
**Auditor:** Heather Young

---

**Allocated Samplers**

$d_i = 91.1$   
 $d_j = 7 \%$   
 $S_j = 17.67 \%$

**Upper Limit = 24.32 %**

**Lower Limit = -10.32%**

**Range = 79.98 to 114.62**

---

**Flow Rate Percentage Differences:**

**Sampler #1:** (See Sect. 3-4)

**Sampler #2:** (See Sect. 3-4)

**Sampler #3:** (See Sect. 3-4)

**Sampler #4:** (See Sect. 3-4)

### **3.4 Single Instrument Accuracy**

Estimates of accuracy for ambient air quality measurements from the TSP method are calculated from the results of independent audits. Once each sampling quarter, the flow rate of each high-volume sampler is audited.

Jim Henry with the IEPA Collinsville Field Office audited the sampler motors. Results of the audit are on record at the field office

### **3.5 Documentation**

For each of the sampling episodes, data packages have been assembled to facilitate the retrieval of necessary data to perform and check calculations, assumptions and determinations and to generate accurate reports. These packages are maintained in a central project file at Chemetco.

Data forms are attached with backup and confirmatory information in Appendices A through C. They include:

- Filter Conditioning and TSP Calculation Logsheets;
- Calculation pages; and,
- Laboratory Analyses Report Sheet.

## **APPENDIX A**

## CALCULATION COVER SHEET

Company Name: Chemetco, Inc.

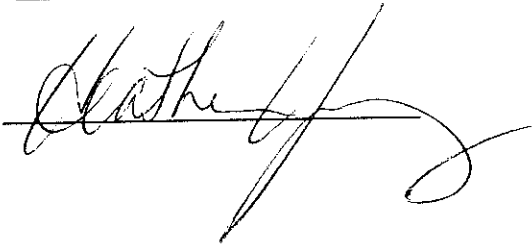
Project Name: Ambient Air Monitoring

Project Number: 00QTR2

Purpose: Sampler Averages

Total Number of Pages: 6 (including this one)

Date: July 21, 2000

Originator's Signature: 

2000 2ND QUARTER AVERAGE CALCULATION

LOCATION N3-QC

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/filtr	TSP ug/filtr	LEAD ug/m3	TSP ug/m3
4/6/00*	6047565	40377	38937.7	1439.3	46.4	2004	654	452000	0.33	225.60
4/12/00	6047575	41816.1	40378.9	1437.2	45.7	1970	6	78900	0.00	40.04
4/18/00	6047580	43257	41818.4	1438.6	46.4	2003	1882	182400	0.94	91.08
4/24/00	6047716	44697.9	43259.5	1438.4	47	2028	109	70900	0.05	34.96
4/30/00	6047726	46138.8	44699.6	1439.2	46.4	2017	7459	255800	3.70	126.82
5/6/00**	6047730	47580.1	46140.6	1439.5	45.1	1948	13744	250400	7.06	128.57
5/12/00	6047738	49021.2	47581.4	1439.8	45.1	1948	5898	248000	3.03	127.31
5/18/00	6047746	50463.1	49023.1	1440	44.4	1918	4275	516000	2.23	269.03
5/24/00	6047753	51903.3	50463.9	1439.4	44.4	1917	6	124500	0.00	64.94
5/30/00	6047758	53353.5	51904.5	1449	44.4	1930	16142	358600	8.36	185.80
6/5/00	6047763	54783.6	53344.8	1438.8	43.7	1886	6	54400	0.00	28.84
6/11/00	6047775	56224.1	54785.4	1438.7	44.4	1916	2000	126800	1.04	66.17
6/17/00	6047827	57663.7	56226.3	1437.4	44.4	1915	6	60300	0.00	31.49
6/23/00***	6047829	59100	57665.7	1434.3	44.4	1910	2331	253500	1.22	132.69
6/27/00	6047834	60524.8	59101.6	1423.2	45.1	1926	6	50800	0.00	26.38
6/29/00	6047839	61965.5	60526.1	1439.4	44.4	1917	6	72100	0.00	37.61
							AVERAGE 1.41			96.86

\* Fields plowed/planted on this day and several days through mid May.

\*\* Upset condition - A trial test (not a normal activity) for a different type of crusher was being performed on the slag.

\*\*\* Ran on wrong day and questions as to the amount of time it actually ran due to a power failure. A makeup test was performed on 6/26 - 6/27.

(\*\* and \*\*\* lead not included in averages.)

2000 2ND QUARTER AVERAGE CALCULATION

LOCATION N3

DATE	FILTER NO	FINISH	TIME	START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
4/6/00*	6047564	2941.92	2918.42	1412	46	46	1949	129.2	420900	0.07	216.01
4/12/00	6047573	2965.52	2941.98	1412	46	46	1949	6	87900	0.00	45.11
4/18/00	6047713	2989.1	2965.56	1412	Motor Out	42.7	1809	109	95100	0.06	52.58
4/24/00	6047720	3012.7	2989.17	1412	43.9	43.9	1860	6939	212400	3.73	114.22
4/30/00	6047724	3036.26	3012.74	1412	43.9	43.9	1860	13205	196900	7.10	105.88
5/6/00**	6047731	3059.8	3036.29	1412	45.1	45.1	1910	4858	213000	2.54	111.49
5/12/00	6047739	3083.34	3059.82	1412	42.7	42.7	1809	3247	392000	1.80	216.72
5/18/00	6047745	3106.9	3083.4	1412	43.3	43.3	1834	6	110000	0.00	59.97
5/24/00	6047752	3130.47	3106.96	1412	42.7	42.7	1809	15092	315300	8.34	174.32
5/30/00	6047759	3154.03	3130.52	1412	42.7	42.7	1809	21	60900	0.01	33.67
6/5/00	6047766	3177.56	3154.05	1412	42.1	42.1	1783	1629	115000	0.91	64.49
6/11/00	6047774	3201.09	3177.59	1412	42.1	42.1	1783	6	55000	0.00	30.84
6/17/00	6047767	3224.59	3201.11	1412	42.1	42.1	1783	2055	210200	1.15	117.87
6/23/00***	6047828	3248.14	3224.62	1412	43.3	43.3	1834	0	51800	0.00	17.12
6/27/00	6047833	3271.88	3248.17	1412	43.9	43.9	1860	6	69500	0.00	37.37
6/29/00	6047840	3295.42	3271.91	1412							
=====											
AVERAGE										1.45	90.30

\* Fields plowed/planted on this day and several days through mid May.

\*\* Upset condition - A trial test (not a normal activity) for a different type of crusher was being performed on the slag.

\*\*\* Ran on wrong day and questions as to the amount of time it actually ran due to apower failure. A makeup test was performed on 6/26 - 6/27.

(\*\* and \*\*\* not included in averages.)

*n=12 or 15*

*n=15, avg = 1.74*

*n=12, avg = 1.45*

*n=14, avg = 1.76*

*(allowed to drop 6/23/00)*

2000 2ND QUARTER AVERAGE CALCULATION

LOCATION OS

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>		
4/6/00*	6047566	1440	0	1440	46	1987	279	205100	0.14	103.21		
4/12/00	6047570	1440	0	1440	44.6	1927	6	74700	0.00	38.77		
4/18/00	6047578	1440	0	1440	44.6	1927	6	78100	0.00	40.54		
4/24/00	6047718	1440	0	1440	44.6	1927	6	64300	0.00	33.37		
4/30/00	6047722	1440	0	1440	44.6	1927	307	112600	0.16	58.44		
5/6/00**	6047733	1440	0	1440	45.3	1957	6	175800	0.00	89.83		
5/12/00	6047737	1440	0	1440	45.3	1957	2588	545000	1.32	278.49		
5/18/00	6047743	1440	0	1440	45.3	1957	6	158000	0.00	80.74		
5/24/00	6047751	1440	0	1440	45.3	1940	1579	93600	0.81	48.25		
5/30/00	6047756	1440	0	1440	44.6	1940	6	73200	0.00	37.73		
6/5/00	6047765	1440	0	1440	44.6	1927	10009	149300	5.19	77.49		
6/11/00	6047773	1440	0	1440	44.6	1940	6	70100	0.00	36.13		
6/17/00	6047825	1440	0	1440	44.6	1927	6	52200	0.00	27.09		
6/23/00	6047830	1440	0	1440	44.6	1927	6	70300	0.00	36.49		
6/27/00												
6/29/00	6047837	1440	0	1440	49.3	2130	456	51500	0.21	24.18		
=====										=====		
										AVERAGE	0.56	65.78

\* Fields plowed/planted on this day and several days through mid May.

\*\* Upset condition - A trial test (not a normal activity) for a different type of crusher was being performed on the slag.

(\*\* Not included in average.)



2000 2ND QUARTER AVERAGE CALCULATION

LOCATION O3

DATE	FILTER NO	TIME FINISH	TIME START	ELAPSED TIME	CFM	CUBIC METERS	LEAD ug/ft <sup>3</sup>	TSP ug/ft <sup>3</sup>	LEAD ug/m <sup>3</sup>	TSP ug/m <sup>3</sup>
4/6/00*	6047567	12651.2	11211.3	1439.9	42.6	1840	879.2	374500	0.48	203.51
4/12/00	6047571	14098.2	12658.2	1440	45.3	1957	6	86200	0.00	44.05
4/18/00	6047579	15540.1	14100.1	1440	46.7	2017	6	100200	0.00	49.67
4/24/00	6047717	16981.7	15541.7	1440	47.3	2043	1488	45200	0.73	22.12
4/30/00	6047723	18422.9	16982.9	1440	46.7	2017	177	152400	0.09	75.54
5/6/00**	6047732	19864.2	18424.3	1439.9	46.7	2017	147	88100	0.07	43.67
5/12/00	6047736	21682.7	20242.7	1440	46.7	2017	4468	298000	2.21	147.71
5/18/00	6047742	23124.1	21684.1	1440	46.7	2017	1090	223000	0.54	110.54
5/24/00	6047750	24565.8	23125.8	1440	47.3	2043	6491	210700	3.18	103.11
5/30/00	6047755	26007.3	24567.2	1440.1	46.7	2018	6	94300	0.00	46.74
6/5/00	6047764	27449.9	26008.9	1441	46.7	2019	1947	187500	0.96	92.88
6/11/00	6047771	28890.2	27449.7	1440	46.7	2017	6	70700	0.00	35.05
6/17/00	6047824	30331.6	28891.6	1440	46.7	2017	6	50700	0.00	25.13
6/23/00	6047831	31772.9	30332.9	1440	46	1987	6	96600	0.00	48.61
6/27/00										
6/29/00	6047836	33213.9	31773.9	1440	46	1987	6115	137800	3.08	69.34

\* Fields plowed/planted on this day and several days through mid May.

\*\* Upset condition - A trial test (not a normal activity) for a different type of crusher was being performed on the slag.

(\*\* Not included in average.)

2000 2ND QUARTER AVERAGE CALCULATION

LOCATION FB

DATE	LEAD -ILTER NO ug/filter	TSP ug/filter
4/6/00	6047569 0	9800
4/12/00	6047577 6	18400
4/18/00	6047714 0	3300
4/24/00	6047721 6	7500
4/30/00	6047729 6	3600
5/6/00	6047734 6	-191500
5/12/00	6047741 6	2000
5/18/00	6047747 6	6000
5/24/00	6047754 6	2200
5/30/00	6047761 6	-100
6/5/00	6047762 6	2200
6/11/00	6047770 6	5500
6/17/00	6047823 6	500
6/23/00	6047838 6	1400
6/27/00		
6/29/00	6047796 6	2200
AVERAGES 5.20		-8603.60

**CALCULATION COVER SHEET**

**Company Name:** Chemetco, Inc.

**Project Name:** Ambient Air Monitoring

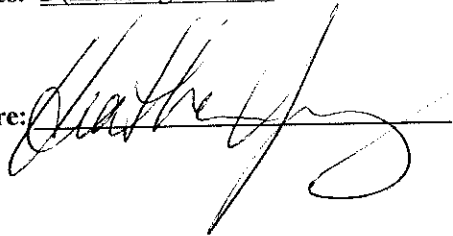
**Project Number:** 00QTR2

**Purpose:** Sampler Precision Calculation

**Total Number of Pages:** 2 (including this one)

**Date:** July 21, 2000

**Originator's Signature:**

A handwritten signature in black ink, appearing to be "D. H. H.", written over a horizontal line.

### SAMPLER PRECISION CALCULATION (PARTICULATE)

<u>Sampling Date</u>	<u>Duplicate Sampler</u>	<u>Official Sampler</u>	<u>Difference</u>	<u>Difference (Square)</u>
04-06-00	225.60	216.01	9.59	91.97
04-12-00	40.04	45.11	-5.07	25.70
04-18-00	91.08	Motor Out	---	---
04-24-00	34.96	52.58	-17.62	310.46
04-30-00	126.82	114.22	12.60	158.76
05-06-00	128.57	Upset Condition	---	---
05-12-00	127.31	111.49	15.82	250.27
05-18-00	269.03	216.72	52.31	2736.34
05-24-00	64.94	59.97	4.97	24.70
05-30-00	185.80	174.32	11.48	131.79
06-05-00	28.84	33.67	-4.83	23.32
06-11-00	66.17	64.49	1.68	2.82
06-17-00	31.49	30.84	0.67	0.449
06-23-00	PF/Reran 6/27	PF/Reran 6/27	---	---
06-27-00	26.38	17.12	9.26	85.75
06-29-00	37.61	37.37	0.24	0.058
			$\Sigma d_i = 91.1$	$\Sigma d_i^2 = 3842.39$

$n=13$

$$d_j = \frac{\Sigma d_i}{n} = \frac{91.1}{13} = 7.00\% \quad S_j = \frac{\Sigma (d_i)^2 - n(d_j)^2}{n-1} = \frac{3842 - 13(7.0)^2}{13-1} = \frac{3842 - 91.0}{12} = 17.67\%$$

$$\text{Upper Limit} = d_j + \frac{1.96(S_j)}{2} = 7.0\% + \frac{1.96(17.67)}{2} = 7.0 + 17.32 = 24.32\%$$

$$\text{Lower Limit} = d_j - \frac{1.96(S_j)}{2} = 7.0\% - \frac{1.96(17.67)}{2} = 7.0 - 17.32 = -10.32\%$$

Official Average Particulate: 90.30 mg/m<sup>3</sup>

Range: 79.98 to 114.62

## APPENDIX B

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 27-Apr-00

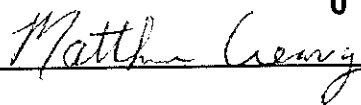
Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047563	EX	879.2	500
G6047564	N3	129.2	420.9
G6047565	N3QC	654	452
G6047566	OS	279	205.1
G6047567	O3	879.2	374.5
G6047569	FB	0	9.8

  
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Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 27-Apr-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047570	OS	<6	74.7
G6047571	O3	<6	86.2
G6047573	N3	<6	87.9
G6047575	N3Qc	<6	78.9
G6047576	EX	<6	93.5
G6047577	FB	<6	18.4

*Matt Creasy*

Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 12-May-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047578	OS	< 6	78.1
G6047579	O3	< 6	100.2
G6047713	N3	229	87.9
G6047580	N3QC	1,882	182.4
G6047712	EX	5685	190.3
G6047714	FB	0	3.3

*Matt Creasy*

Analyst: Matt Creasy

Title: Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

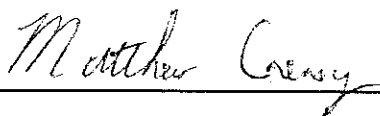
ATTN: Heather Young

Date: 22-May-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047716	N3QC	109	70.9
G6047720	N3	109	95.1
G6047717	O3	1,488	45.2
G6047718	OS	<6	64.3
G6047721	FB	<6	7.5



Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 22-May-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047722	OS	307	112.6
G6047723	O3	177	152.4
G6047724	N3	6,939	212.4
G6047726	N3QC	7,459	255.8
G6047715	Ex	15,001	290.4
G6047729	FB	<6	3.6

*Matthew Creasy*

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 23-May-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047733	OS	< 6	-175.8
G6047732	O3	147	88.1
G6047731	N3	13,205	196.9
G6047730	N3QC	13,744	250.4
G6047728	Ex	15,521	296.5
G6047734	FB	< 6	-191.5

*Matt Creasy*

Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 31-May-00

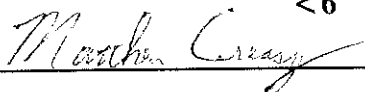
Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047737	OS	2588	545
G6047736	O3	4468	298
G6047739	N3	4,858	213
G6047738	N3QC	5,898	248
G6047735	Ex	8,889	291
G6047741	FB	<6	2



Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 1-Jun-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047743	OS	<6	158
G6047742	O3	1090	223
G6047745	N3	3,247	392
G6047746	N3QC	4,275	516
G6047744	Ex	21,899	727
G6047747	FB	<6	6

*Matt Creasy*

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 5-Jun-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047751	OS	1579	93.6
G6047750	O3	6491	210.7
G6047752	N3	<6	110
G6047753	N3QC	<6	124.5
G6047748	Ex	not used	
G6047754	FB	<6	2.2

Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 5-Jun-00

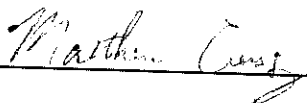
Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047756	na	< 6	73.2
G6047755	na	< 6	94.3
G6047759	na	15,092	315.3
G6047758	na	16,142	358.6
G6047761	na	< 6	-0.1

  
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Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 14-Jun-00

Sample type:

Hi-Vol Air Monitoring Program

Sample Identification:

Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047765	Os	10,009	149.3
G6047764	O3	1947	187.5
G6047766	N3	21	60.9
G6047763	N3QC	<6	54.4
G6047748	Extra	21	79.7
G6047762	FB	<6	2.2

*Matt Creasy*

Analyst:

Matt Creasy

Title:

Laboratory Technician



Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 21-Jun-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047760	EX	2,372	153.8
G6047770	FB	<6	5.5
G6047771	O3	<6	70.7
G6047773	OS	<6	70.1
G6047774	N3	1,629	115
G6047775	N3QC	2000	126.8

*Matt Creasy*

Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 2-Jul-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047767	N3	<6	55
G6047768	EX	<6	62.1
G6047823	FB	<6	0.5
G6047824	O3	<6	50.7
G6047825	OS	<6	52.2
G6047827	N3QC	<6	60.3

  
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Analyst: Matt Creasy

Title: Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

ATTN: Heather Young

Date: 6-Jul-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047822	EX	5,923	187.2
G6047828	N3	2055	210.2
G6047829	N3QC	2,331	253.5
G6047830	OS	<6	70.3
G6047831	O3	<6	96.6
G6047833	N3	<6	51.8
G6047834	N3QC	<6	50.8
G6047838	BK	<6	1.4

Analyst:

Matt Creasy

Title:

Laboratory Technician

Chemetco, Inc.  
Rt. 3 at Chemetco Lane  
Hartford, IL 62048

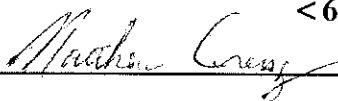
ATTN: Heather Young

Date: 14-Jul-00

Sample type: Hi-Vol Air Monitoring Program

Sample Identification: Listed below

Filter ID	Location	Pb, ug/filter	TSP,mg/filter
G6047837	OS	456	51.5
G6047836	O3	6115	137.8
G6047840	N3	<6	69.5
G6047839	N3QC	<6	72.1
G6047835	Extra	<6	98
G6047796	FB	<6	2.2



Analyst: Matt Creasy

Title: Laboratory Technician

## APPENDIX C

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg		Date Out	Weight, mg	W <sub>net</sub> , mg	
G6047563	1/28/00	2/3/00	4374	4/22/00	4/24/00	4871.4	500.0	
G6047564	1/28/00	2/3/00	4355.4	4/22/00	4/24/00	4776.3	420.9	
G6047565	1/28/00	2/3/00	4372.0	4/22/00	4/24/00	4824.0	452.0	
G6047566	1/28/00	2/3/00	4250.8	4/22/00	4/24/00	4455.9	205.1	
G6047567	1/28/00	2/3/00	4380.5	4/22/00	4/24/00	4755.0	374.5	
G6047568	1/28/00	2/3/00	4368.5	4/15/00	4/16/00	4373.1	7.6	
G6047569	1/28/00	2/3/00	4366.8	4/22/00	4/24/00	4376.6	9.8	
G6047570	1/28/00	2/3/00	4355.8	4/22/00	4/24/00	4430.5	74.7	
G6047571	1/28/00	2/3/00	4370.7	4/22/00	4/24/00	4456.9	86.2	
G6047572								
G6047573	1/28/00	2/3/00	4348.5	4/22/00	4/24/00	4436.4	87.9	
G6047574								
G6047575	1/28/00	2/3/00	4386.8	4/22/00	4/24/00	4465.7	78.9	
G6047576	1/28/00	2/3/00	4364.2	4/22/00	4/24/00	4457.7	93.5	
G6047577	1/28/00	2/3/00	4329.2	4/22/00	4/24/00	4347.6	18.4	
G6047578	1/28/00	2/3/00	4340.0	5/5/00	5/8/00	4418.1	78.1	

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg
G6047579	1/28/00	2/3/00	4331.2	5/5/00	5/8/00	4431.4	100.2
G6047580	1/28/00	2/3/00	4322.5	5/5/00	5/8/00	4504.9	182.4
G6047581							
G6047582							
G6047583							
G6047584							
G6047585							
G6047586							
G6047587							
G6047588							
G6047589							
G6047590							
G6047591							
G6047592							
G6047593							
G6047594							

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Post Sampling Conditioning			
	Date In	Date Out	Weight, mg		Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6047712	4/10/00	4/12/00	4284.1	5/5/00	5/8/00	4474.4	190.3	
G6047713	4/10/00	4/12/00	4305.8	5/5/00	5/8/00	4378.2	72.4	
G6047714	4/10/00	4/12/00	4295.8	5/5/00	5/8/00	4299.1	3.3	
G6047715	4/10/00	4/12/00	4289.8	5/14/00	5/22/00	4580.2	290.4	
G6047716	4/10/00	4/12/00	4319.5	5/5/00	5/8/00	4390.4	70.9	
G6047717	4/10/00	4/12/00	4308.7	5/5/00	5/8/00	4403.8	95.1	
G6047718	4/10/00	4/12/00	4337.1	5/5/00	5/8/00	4382.3	45.2	
G6047719								
G6047720	4/10/00	4/12/00	4292.0	5/5/00	5/8/00	4356.3	64.3	
G6047721	4/10/00	4/12/00	4294.6	5/5/00	5/8/00	4307.1	7.5	
G6047722	4/10/00	4/12/00	4302.5	5/14/00	5/22/00	4415.1	112.6	
G6047723	4/10/00	4/12/00	4296.5	5/14/00	5/22/00	4448.9	152.4	
G6047724	4/10/00	4/12/00	4323.4	5/19/00	5/22/00	4535.7	212.4	
G6047725								
G6047726	4/10/00	4/12/00	4280.7	5/14/00	5/22/00	4536.5	255.8	
G6047727								



Chemetco Environmental Management  
Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning				
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug
G6047728	4/10/00	4/12/00	4292.4	5/19/00	5/22/00	4588.9	296.5	
G6047729	4/10/00	4/12/00	4273.5	5/19/00	5/22/00	4277.1	3.6	
G6047730	4/10/00	4/12/00	4295.5	5/19/00	5/22/00	4545.9	250.4	
G6047731	4/10/00	4/12/00	4303.7	5/19/00	5/22/00	4500.6	196.9	
G6047732	4/10/00	4/12/00	4300.1	5/19/00	5/22/00	4448.2	88.1	
G6047733	4/10/00	4/12/00	4562.4	5/19/00	5/22/00	4386.6	-175.8	
G6047734	4/10/00	4/12/00	4547.9	5/19/00	5/22/00	4356.4	-191.5	
G6047735	4/10/00	4/12/00	4363.7	5/26/00	5/31/00	4654.4	290.7	
G6047736	5/2/00	5/5/00	4349.3	5/26/00	5/31/00	4616.0	296.7	
G6047737	5/2/00	5/5/00	4352.2	5/26/00	5/31/00	4897.2	545.0	
G6047738	5/2/00	5/5/00	4357.5	5/26/00	5/31/00	4605.0	247.50	
G6047739	5/2/00	5/5/00	4354.9	5/26/00	5/31/00	4568.1	213.20	
G6047740								
G6047741	5/2/00	5/5/00	4358.4	5/26/00	5/31/00	4360.2	1.8	
G6047742	5/2/00	5/5/00	4346.5	5/26/00	5/31/00	4569.2	222.7	
G6047743	5/2/00	5/5/00	4350.8	5/26/00	5/31/00	4509.2	158.4	

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , ug
G6047744	5/2/00	5/5/00	4362.7	5/26/00	5/31/00	5089.2	726.5
G6047745	5/2/00	5/5/00	4360.8	5/26/00	5/31/00	4753.1	392.3
G6047746	5/2/00	5/5/00	4335.2	5/26/00	5/31/00	4185.7	516.2
G6047747	5/2/00	5/5/00	4353.9	5/26/00	5/31/00	4359.7	5.8
G6047748	5/2/00	5/5/00	4356.4	6/19/00	6/12/00	4436.1	79.7
G6047749							
G6047750	5/2/00	5/5/00	4358.0	5/26/00	6/02/00	4568.7	210.7
G6047751	5/2/00	5/5/00	4348.2	5/26/00	6/02/00	4441.8	93.6
G6047752	5/2/00	5/5/00	4343.4	5/26/00	6/02/00	4453.4	110
G6047753	5/2/00	5/5/00	4356.8	5/26/00	6/02/00	4481.3	124.5
G6047754	5/2/00	5/5/00	4334.6	5/26/00	6/02/00	4336.8	2.2
G6047755	5/2/00	5/5/00	4363.2	6/02/00	6/05/00	4457.5	94.3
G6047756	5/19/00	5/22/00	4261.9	6/02/00	6/05/00	4335.1	73.2
G6047757							
G6047758	5/19/00	5/22/00	4280.8	6/02/00	6/05/00	4639.4	358.6
G6047759	5/19/00	5/22/00	4306.5	6/02/00	6/05/00	4631.6	315.3

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Date In	Post Sampling Conditioning				W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg		Date Out	Weight, mg	W <sub>net</sub> , mg		
G6047760	5/19/00	5/22/00	4276.1	6/16/00	6/19/00	4429.9	153.8		
G6047761	5/19/00	5/22/00	4281.9	6/02/00	6/05/00	4281.8	-0.1		
G6047762	5/19/00	5/22/00	4313.9	6/09/00	6/12/00	4316.1	2.2		
G6047763	5/19/00	5/22/00	4306.0	6/09/00	6/12/00	4360.4	54.4		
G6047764	5/19/00	5/22/00	4263.3	6/09/00	6/12/00	4450.8	187.5		
G6047765	5/19/00	5/22/00	4282.0	6/09/00	6/12/00	4431.3	149.3		
G6047766	5/19/00	5/22/00	4290.3	6/09/00	6/12/00	4351.2	60.9		
G6047767	6/5/00	6/7/00	4289.1	6/23/00	6/27/00	4344.1	55.0		
G6047768	6/5/00	6/7/00	4270.4	6/23/00	6/27/00	4332.5	62.1		
G6047769	6/5/00	6/7/00							
G6047770	6/5/00	6/7/00	4283.5	6/16/00	6/19/00	4289.0	5.5		
G6047771	6/5/00	6/7/00	4300.2	6/16/00	6/19/00	4370.9	70.7		
G6047772	6/5/00	6/7/00							
G6047773	6/5/00	6/7/00	4302.8	6/16/00	6/19/00	4372.9	70.1		
G6047774	6/5/00	6/7/00	4304.4	6/16/00	6/19/00	4419.4	115		
G6047775	6/5/00	6/7/00	4270.2	6/16/00	6/19/00	4397.0	126.8		

Chemetco Environmental Management  
Filter Conditioning Logsheet

Filter Number	Pre Sampling Conditioning			Post Sampling Conditioning			W <sub>net</sub> , ug
	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	
G6047776	6/27/00	6/29/00	4284.4	7/19/00	7/21/00	4398.8	114.4
G6047777	6/27/00	6/29/00	4290.9	7/19/00	7/21/00	4454.8	163.9
G6047778	6/27/00	6/29/00	4278.3	7/19/00	7/21/00	4334.7	56.4
G6047779	6/27/00	6/29/00	4275.1	7/19/00	7/21/00	4275.7	0.6
G6047780	6/27/00	6/29/00	4277.1	7/19/00	7/21/00	4484.3	207.2
G6047781	6/27/00	6/29/00	4361.8	7/13/00	7/18/00	4361.5	0.3
G6047782							
G6047783	6/27/00	6/29/00	4337.5	7/12/00	7/12/00	4339.1	1.6
G6047784	6/27/00	6/29/00	4357.2	7/13/00	7/19/00	4519.2	162
G6047785							
G6047786	6/27/00	6/29/00	4341.8	7/13/00	7/19/00	4457.1	115.3
G6047787	6/27/00	6/29/00	4340.1	7/13/00	7/18/00	4465.1	125
G6047788	6/27/00	6/29/00	4356.8	7/13/00	7/18/00	4429.4	72.6
G6047789	6/27/00	6/29/00	4347.2	7/19/00	7/21/00	4411.6	64.4
G6047790	6/27/00	6/29/00	4360.6	7/10/00	7/12/00	4504.9	144.3
G6047791	6/27/00	6/29/00	4357.0	7/10/00	7/12/00	4449.0	92.0

Chemetco Environmental Management  
Filter Conditioning Logsheet

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg
G6047792	6/27/00	6/29/00	4361.2	7/10/00	7/12/00	4564.9	203.7
G6047793	6/27/00	6/29/00	4339.5	7/10/00	7/12/00	4512.9	173.4
G6047794	6/27/00	6/29/00	4351.9	7/10/00	7/12/00	4503.4	151.5
G6047795							
G6047796	6/27/00	6/29/00	4348.2	7/9/00	7/11/00	4350.6	2.4
G6047797							
G6047798							
G6047799							
G6047800							
G6047801							
G6047802							
G6047803							
G6047804							
G6047805							
G6047806							
G6047807							

Chemetco Environmental Management  
Filter Conditioning Logsheet

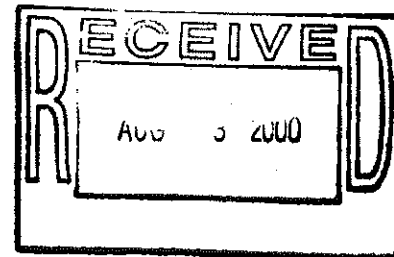
Pre Sampling Conditioning					Post Sampling Conditioning				
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg	W <sub>net</sub> , ug	
G6047820									
G6047821									
G6047822	6/5/00	6/7/00	4306.4	7/3/00	7/5/00	4493.6	187.2		
G6047823	6/5/00	6/7/00	4323.6	6/23/00	6/27/00	4324.1	0.5		
G6047824	6/5/00	6/7/00	4327.8	6/23/00	6/27/00	4378.5	50.7		
G6047825	6/5/00	6/7/00	4326.2	6/23/00	6/27/00	4378.4	52.2		
G6047826									
G6047827	6/5/00	6/7/00	4327.7	6/23/00	6/27/00	4388.0	60.3		
G6047828	6/5/00	6/7/00	4326.6	7/3/00	7/5/00	4536.8	210.2		
G6047829	6/5/00	6/7/00	4339.6	7/3/00	7/5/00	4593.1	253.5		
G6047830	6/5/00	6/7/00	4268.6	7/3/00	7/5/00	4338.9	70.3		
G6047831	6/5/00	6/7/00	4290.8	7/3/00	7/5/00	4387.4	96.6		
G6047832									
G6047833	6/5/00	6/7/00	4292.1	7/3/00	7/5/00	4343.9	51.8		
G6047834	6/5/00	6/7/00	4303.1	7/3/00	7/5/00	4353.9	50.8		
G6047835	6/5/00	6/7/00	4318.2	7/9/00	7/11/00	4416.2	98.0		

Pre Sampling Conditioning				Post Sampling Conditioning			
Filter Number	Date In	Date Out	Weight, mg	Date In	Date Out	Weight, mg	W <sub>net</sub> , mg
G6047836	6/5/00	6/7/00	4297.9	7/9/00	7/11/00	4435.7	137.8
G6047837	6/5/00	6/7/00	4262.6	7/9/00	7/11/00	4314.1	51.5
G6047838	6/5/00	6/7/00	4288.4	7/3/00	7/5/00	4290.2	1.4
G6047839	6/5/00	6/7/00	4290.3	7/9/00	7/11/00	4362.4	72.1
G6047840	6/5/00	6/7/00	4259.6	7/9/00	7/11/00	4329.1	69.5
G6047841							
G6047842							
G6047843							
G6047844							
G6047845							
G6047846							
G6047847							
G6047848							
G6047849							
G6047850							
G6047851							



FIRST IN PEOPLE - QUALITY - SERVICE

P.O. Box 67 • Hartford, IL 62048  
618-254-4381 • 800-444-5564



July 28, 2000

Illinois Environmental Protection Agency  
Air Monitoring Section  
c/o Mr. Terry Sweitzer  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE Second Quarter 2000 Ambient Air Monitoring Report

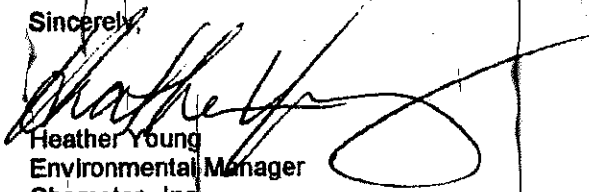
Dear Mr. Sweitzer,

Enclosed are two copies of the report entitled, "Ambient Air Monitoring Quarterly Report April - June, 2000 for Total Particulate and Lead."

A table of results from the extra sampler located at the northwest corner and within the fence (the former N3 and N3-QC locations) is attached to this letter. Since this is not included in the official ambient air monitoring program, it is not included in the report.

If you have any questions or require additional information, please contact me at 618/254-4381 ext. 268.

Sincerely,



Heather Young  
Environmental Manager  
Chemetco, Inc.

Attachment

cc: Jim Henry, IEPA-Collinsville Region  
Jeff Trevino, USEPA  
Chief, Air Enforcement Assurance Branch, USEPA  
George von Stamwitz, Armstrong, Teasdale, Schlafly & Davis  
File





### 3.2 Sampler Quarterly Averages

The simple quarterly average for each set of data from a particular sampler are calculated in the following tables, 3.1 through 3.4.

TABLE 3.1 - Sampler Location N3

DATE	FILTER NO	LEAD (ug/m <sup>3</sup> )	TSP* (ug/m <sup>3</sup> )
04/6/00	6047564	0.07	216.01 (Fields Plowed and Planted)
04/12/00	6047573	0.00	45.11
04/18/00	6047713	Motor Out	"
04/24/00	6047720	0.06	52.58
04/30/00	6047724	3.73	114.22
05/06/00	6047731	Upset Condition	"
05/12/00	6047739	2.54	111.49
05/18/00	6047745	1.80	216.72
05/24/00	6047752	0.00	59.97
05/30/00	6047759	8.34	174.32
06/05/00	6047766	0.01	33.67
06/11/00	6047774	0.91	64.49
06/17/00	6047767	0.00	30.84
06/23/00	6047828	Power Failure/Rerun	
06/27/00	6047833	0.00	17.12
06/29/00	6047840	0.00	37.37
		=====	=====
	AVERAGE	1.45	90.30

TABLE 3.2 - Sampler Location OS

DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
04/06/00	6047566	0.14	103.21 (Fields Plowed and Planted
04/12/00	6047570	0.00	38.77
04/18/00	6047578	0.00	40.54
04/24/00	6047718	0.00	33.37
04/30/00	6047722	0.16	58.44
05/06/00	6047733	Upset condition	
05/12/00	6047737	1.32	278.49
05/18/00	6047743	0.00	80.74
05/24/00	6047751	0.81	48.25
05/30/00	6047756	0.00	37.73
06/05/00	6047765	5.19	77.49
06/11/00	6047773	0.00	36.13
06/17/00	6047825	0.00	27.09
06/23/00	6047830	0.00	36.49
06/29/00	6047837	0.21	24.18
		=====	=====
	AVERAGE	0.56	65.78

TABLE 3.3 - Sampler Location O3

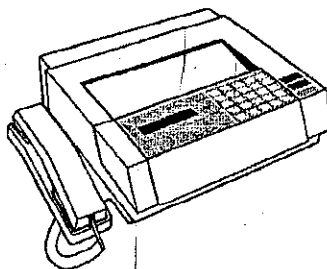
DATE	FILTER NO.	LEAD ( $\mu\text{g}/\text{m}^3$ )	TSP* ( $\mu\text{g}/\text{m}^3$ )
04/6/00	6047567	0.48	203.51 (Field plowed and planted))
04/12/00	6047571	0.00	44.05
04/18/00	6047579	0.00	49.67
04/24/00	6047717	0.73	22.12
04/30/00	6047723	0.09	75.54
04506/00	6047732	0.07	43.67
05/12/00	6047736	2.21	147.71
05/18/00	6047742	0.54	110.54
05/24/00	6047750	3.18	103.11
05/30/00	6047755	0.00	46.74
06/05/00	6047764	0.96	92.88
06/11/00	6047771	0.00	35.05
06/17/00	6047824	0.00	25.13
06/23/00	6047831	0.00	48.61
06/29/00	6047836	<u>3.08</u>	<u>69.34</u>
	AVERAGE	0.81	76.71



## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

## TELEFAX



## IEPA - Air Monitoring Section

DATE: 9/27

TIME: \_\_\_\_\_

# of pages: \_\_\_\_\_

(including cover sheet)

TO: Bonnie Bush

Company: \_\_\_\_\_

FROM: Terry Sweitzer (fax: 217/ 557-4233)

COMMENTS:

Per your request.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If any difficulty is experienced with this transmission, please call 217/ 782-9315

TELEFAX

GEORGE H. RYAN, GOVERNOR